Manual No.'14•SRK-T-165

RESIDENTIAL AIR-CONDITIONING TECHNICAL MANUAL & PARTS LIST

WALL MOUNTED TYPE RESIDENTIAL AIR-CONDITIONERS

(Split system, air cooled cooling only type)

SRK19CNS-S
SRK25CNS-S

MITSUBISHI HEAVY INDUSTRIES, LTD.

TECHNICAL MANUAL

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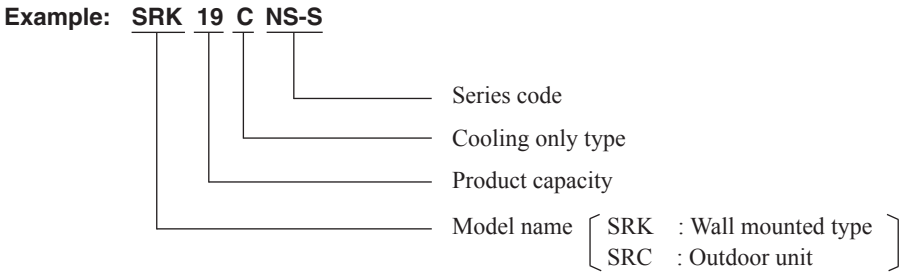
■How to read the model name



1. SPECIFICATIONS

Item \ Model					SRK19CNS-S	
					Indoor unit **SRK19CNS-S**	Outdoor unit **SRC19CNS-S**
Cooling capacity (1)				W	5300	
Power supply					1 Phase, 220-240V, 50Hz	
Operation data (1)	Power consumption		Cooling	kW	1.44	
	Running current		Cooling	A	6.4	
	Inrush current				3.6	
	COP		Cooling		3.68	
	Noise level	Cooling	Sound level	dB(A)	Hi : 47 Me : 42 Lo : 39	50
			Power level	dB	60	65
Exterior dimensions (Height x Width x Depth)				mm	309 x 890 x 251	640 x 850 (+65) x 290
Exterior appearance (Munsell color)					Fine snow (8.0Y 9.3/0.1) near equivalent	Stucco white (4.2Y 7.5/1.1) near equivalent
Net weight				kg	12	44.5
Refrigerant equipment	Compressor type & Q'ty				—	PA190M2AS-4KTL1 (Rotary type) x 1
	Motor (Starting method)			kW	—	PSC
	Refrigerant oil			ℓ	0.62 (ESTER OIL VG74)	
	Refrigerant (4)			kg	R410A 1.34 (Pre-Charged up to the piping length of 7.5m)	
	Heat exchanger				Louver fins & inner grooved tubing	Louver fins & inner grooved tubing
	Refrigerant control				Capillary tubes + Electronic expansion valve	
	Deice control				Microcomputer control	
Air handling equipment	Fan type & Q'ty				Tangential fan x 1	Propeller fan x 1
	Motor			W	30	40
	Air flow		Cooling	m^3/min	15	38
	Fresh air intake				Not possible	—
	Air filter, Quality / Quantity				Polypropylene net (washable) x 2	—
Shock & vibration absorber					—	Cushion rubber (for compressor)
Operation control	Operation switch				Wireless remote control	—
	Room temperature control				Microcomputer thermostat	—
	Operation Display				RUN : Green, TIMER : Yellow, HI POWER : Green, 3D AUTO : Green	
Safety devices					Compressor overheat protection, Frost protection, Serial signal error protection, Fan motor error protection,	
Installation data	Refrigerant piping size (O.D)			mm	Liquid line: ϕ6.35 (1/4") Gas line: ϕ15.88 (5/8")	
	Connecting method				Flare connecting	
	Attached length of piping			m	Liquid line : 0.55 Gas line : 0.49	—
	Insulation for piping				Necessary (Both sides), independent	
	Refrigerant line (one way) length			m	Max. 25	
	Vertical height difference between outdoor unit and indoor unit				Max.15 (Outdoor unit is higher) Max.15 (Outdoor unit is lower)	
Drain hose					Connectable (VP 16)	—
Power cable					2m (3 Cores wih Earth)	
Recommended breaker size				A	20	
Connection wiring	Size x Core number				1.5mm^2 x 4 cores (Including earth cable)	
	Connecting method				Terminal block (Screw fixing type)	
Accessories (included)					Mounting kit	
Option parts					—	

Note (1) The data are measured at the following conditions. The pipe length is 7.5m.

Item / Operation	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling	27˚C	19˚C	35˚C	24˚C	ISO-T1, JIS C 9612

(2) This air-conditioner is manufactured and tested in conformity with the ISO.
(3) The operation data are applied to the 230V districts respectively.
(4) The refrigerant quantity to be charged includes the refrigerant in 7.5m connecting piping.
(Purging is not required even for the short piping.)
If the piping length is 7.5m to 15m, additional refrigerant is not required.

Item \ Model					SRK25CNS-S	
					Indoor unit **SRK25CNS-S**	Outdoor unit **SRC25CNS-S**
Cooling capacity (1)				W	7400	
Power supply					1 Phase, 220-240V, 50Hz	
Operation data (1)	Power consumption		Cooling	kW	2.065	
	Running current		Cooling	A	9.2	
	Inrush current				43.7	
	COP		Cooling		3.58	
	Noise level	Cooling	Sound level	dB(A)	Hi : 50 Me : 46 Lo : 43	55
			Power level	dB	60	67
Exterior dimensions (Height x Width x Depth)				mm	318 x 1098 x 248	750 x 880 (+88) x 340
Exterior appearance (Munsell color)					Fine snow (8.0Y 9.3/0.1) near equivalent	Stucco white (4.2Y 7.5/1.1) near equivalent
Net weight				kg	14.5	53
Refrigerant equipment	Compressor type & Q'ty				—	PA270G2CS-4MUL1 (Rotary type) x 1
	Motor (Starting method)			kW	—	PSC
	Refrigerant oil			ℓ	0.85 (ESTER OIL VG74)	
	Refrigerant (4)			kg	R410A 1.05 (Pre-Charged up to the piping length of 7m)	
	Heat exchanger				Louver & inner grooved tubing	Aluminium heat-exchanger
	Refrigerant control				Capillary tubes + Electronic expansion valve	
	Deice control				Microcomputer control	
Air handling equipment	Fan type & Q'ty				Tangential fan x 1	Propeller fan x 1
	Motor			W	56	90
	Air flow		Cooling	m^3/min	Hi : 20.0 Me : 17.0 Lo : 14.0	60
	Fresh air intake				Not possible	—
	Air filter, Quality / Quantity				Polypropylene net (washable) x 2	—
Shock & vibration absorber					—	Cushion rubber (for compressor)
Operation control	Operation switch				Wireless remote control	—
	Room temperature control				Microcomputer thermostat	—
	Operation Display				RUN : Green, TIMER : Yellow, HI POWER : Green, 3D AUTO : Green	
Safety devices					Compressor overheat protection, Frost protection, Serial signal error protection, Fan motor error protection,	
Installation data	Refrigerant piping size (O.D)			mm	Liquid line : ϕ 6.35 (1/4") Gas line : ϕ 15.88 (5/8")	
	Connecting method				Flare connecting	
	Attached length of piping			m	Liquid line : 0.70 Gas line : 0.63	—
	Insulation for piping				Necessary (Both sides), independent	
	Refrigerant line (one way) length			m	Max. 25	
	Vertical height difference between outdoor unit and indoor unit				Max.15 (Outdoor unit is higher) Max.15 (Outdoor unit is lower)	
Drain hose					Connectable (VP 16)	—
Power cable					2m (3 Cores wih Earth)	
Recommended breaker size				A	20	
Connection wiring	Size x Core number				1.5mm^2 x 4 cores (Including earth cable)	
	Connecting method				Terminal block (Screw fixing type)	
Accessories (included)					Mounting kit	
Option parts					—	

Note (1) The data are measured at the following conditions. The pipe length is 7.5m.

Item / Operation	Indoor air temperature		Outdoor air temperature		Standards
	DB	WB	DB	WB	
Cooling	27˚C	19˚C	35˚C	24˚C	ISO-T1, JIS C 9612

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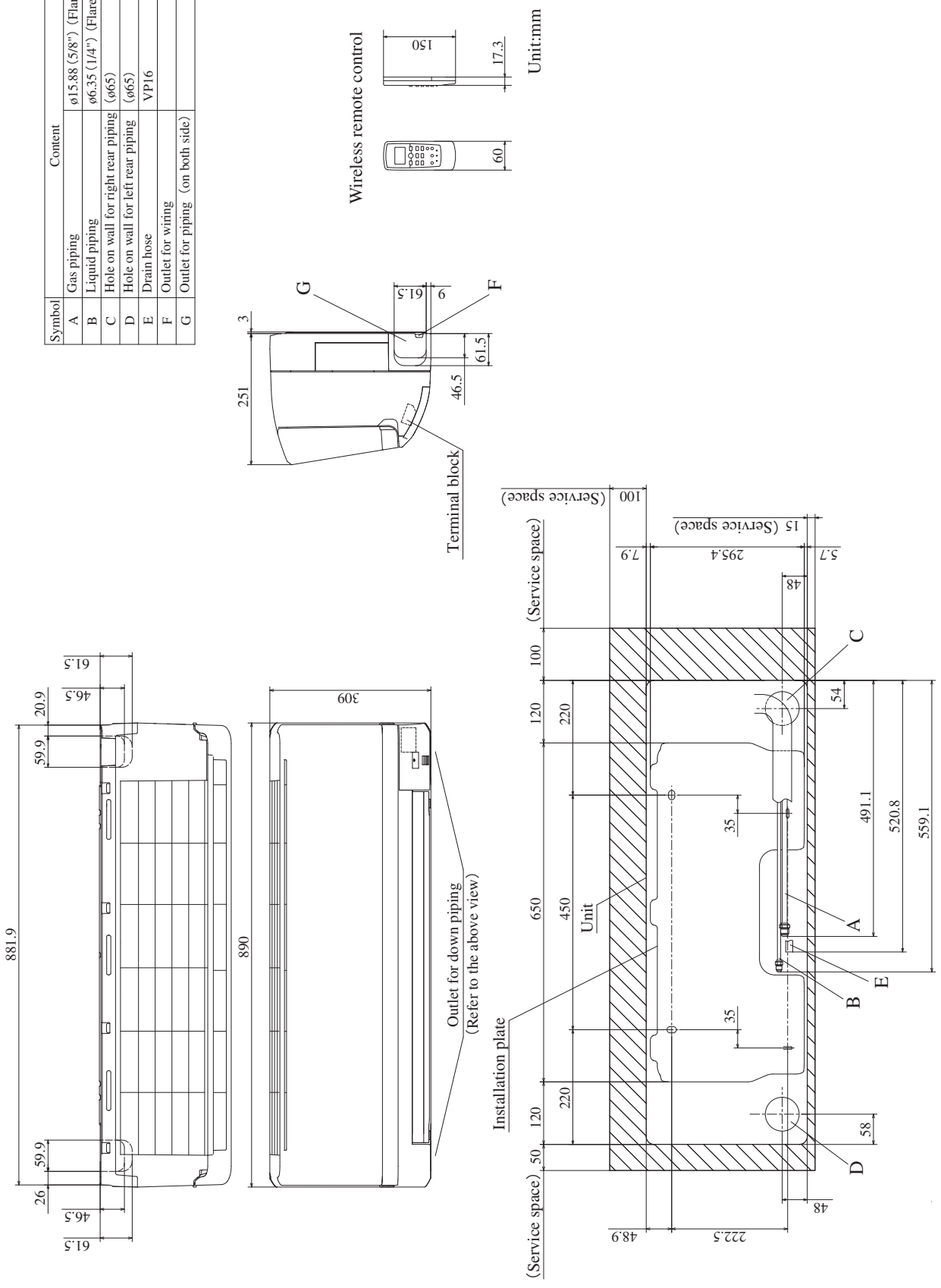
(4) The refrigerant quantity to be charged includes the refrigerant in 7.5m connecting piping.
(Purging is not required even for the short piping.)
If the piping length is 7.5m to 15m, additional refrigerant is not required.

2. EXTERIOR DIMENSIONS

(1) Indoor units

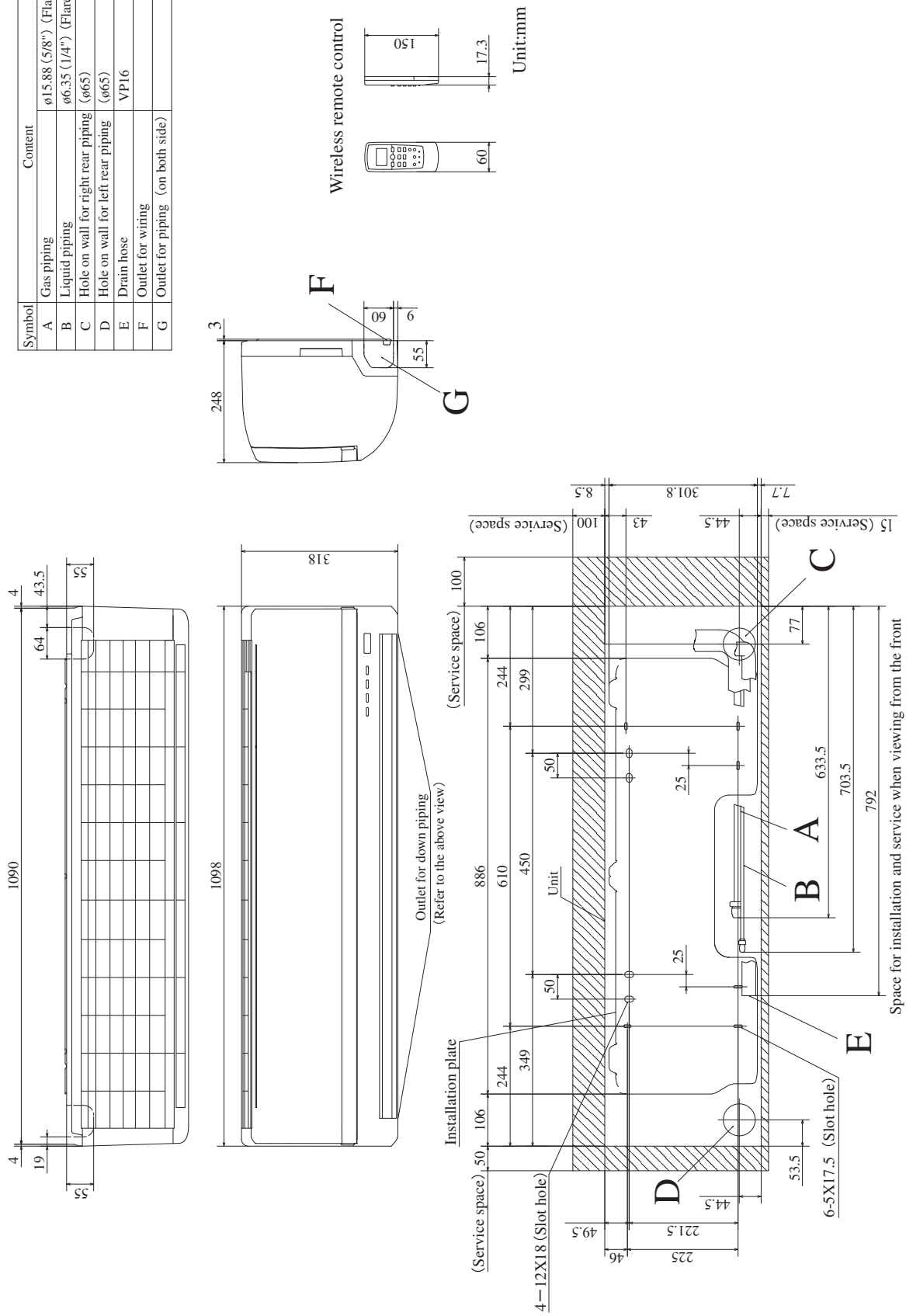
Model SRK19CNS-S

Symbol	Content	
A	Gas piping	ø15.88 (5/8") (Flare)
B	Liquid piping	ø6.35 (1/4") (Flare)
C	Hole on wall for right rear piping	(ø65)
D	Hole on wall for left rear piping	(ø65)
E	Drain hose	VP16
F	Outlet for wiring	
G	Outlet for piping (on both side)	



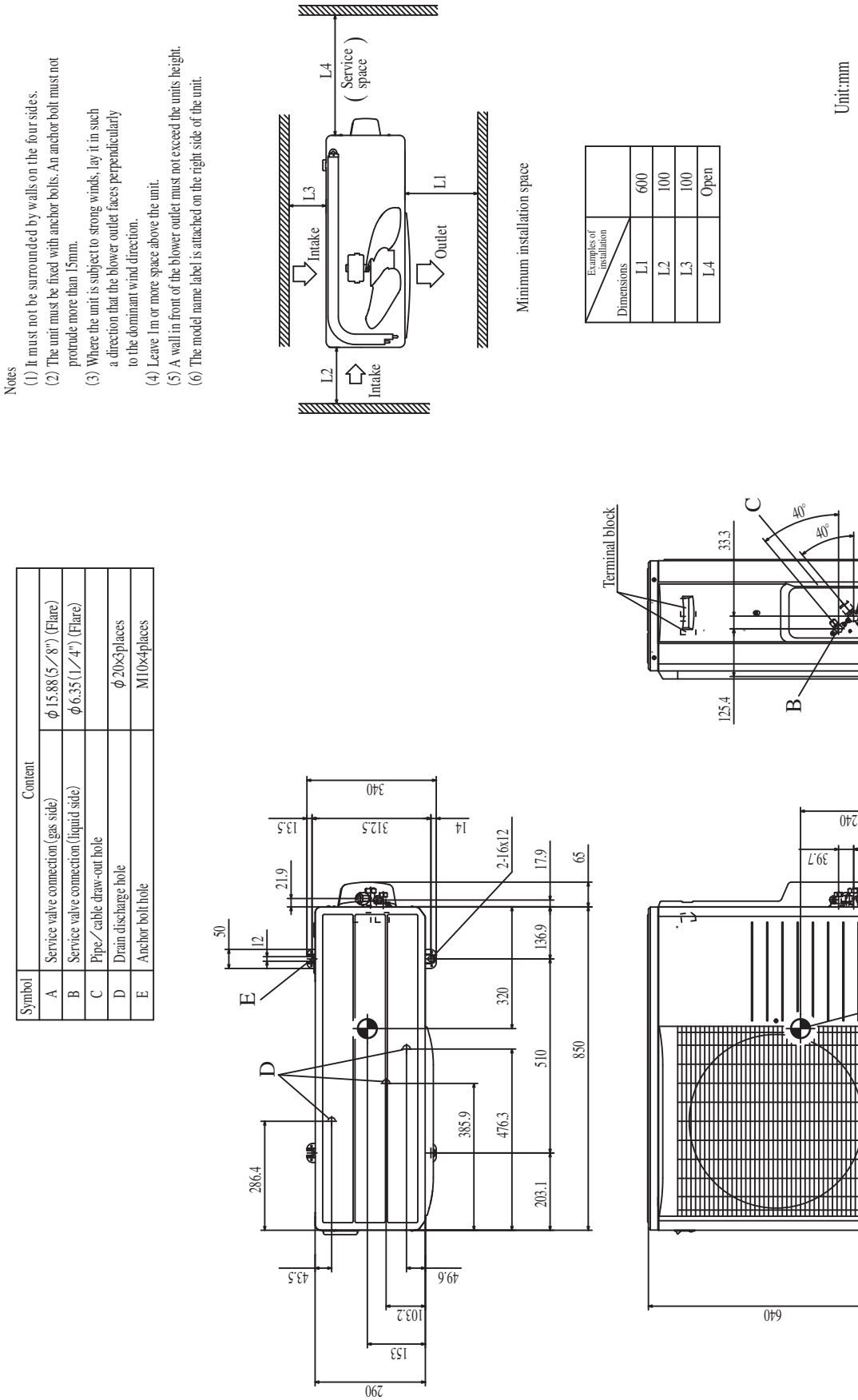
Model SRK25CNS-S

Symbol	Content	
A	Gas piping	ø15.88 (5/8") (Flare)
B	Liquid piping	ø6.35 (1/4") (Flare)
C	Hole on wall for right rear piping	(ø65)
D	Hole on wall for left rear piping	(ø65)
E	Drain hose	VP16
F	Outlet for wiring	
G	Outlet for piping (on both side)	



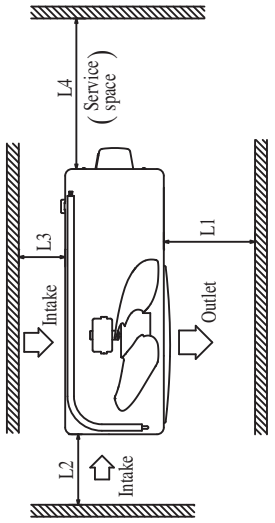
(2) Outdoor units

Model SRC19CNS-S



Model SRC25CNS-S

Notes
(1) It must not be surrounded by walls on the four sides.
(2) The unit must be fixed with anchor bolts. An anchor bolt must not protrude more than 15mm.
(3) Where the unit is subject to strong winds, lay it in such a direction that the blower outlet faces perpendicularly to the dominant wind direction.
(4) Leave 1m or more space above the unit.
(5) A wall in front of the blower outlet must not exceed the units height.
(6) The model name label is attached on the right side of the unit.

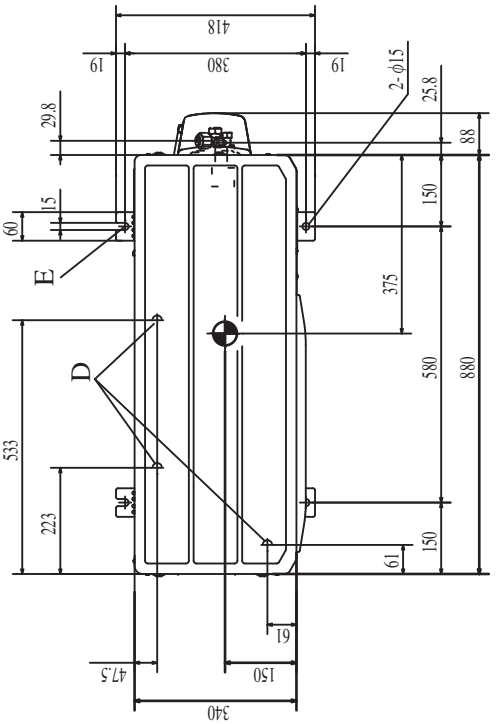


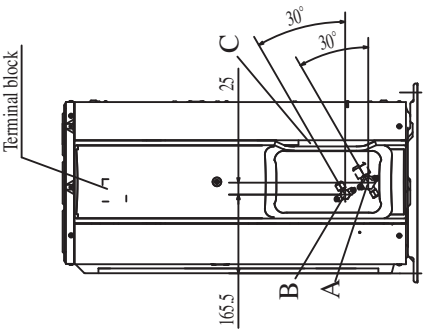
Minimum installation space

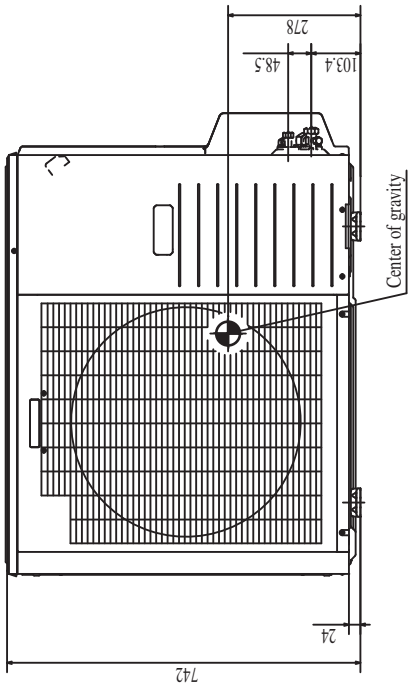
Examples of installation / Dimensions	
L1	600
L2	100
L3	100
L4	Open

Unit:mm

Symbol	Content	
A	Service valve connection (gas side)	ϕ15.88 (5/8") (Flare)
B	Service valve connection (liquid side)	ϕ6.35 (1/4") (Flare)
C	Pipe/cable draw-out hole	
D	Drain discharge hole	ϕ20x3places
E	Anchor bolt hole	M10x4places

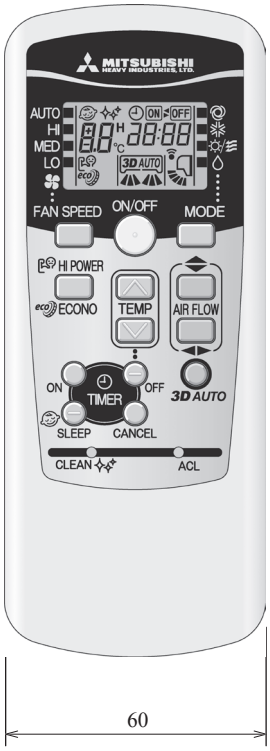


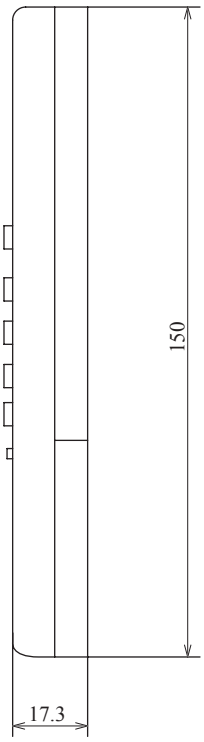




(3) Wireless remote control

Unit: mm

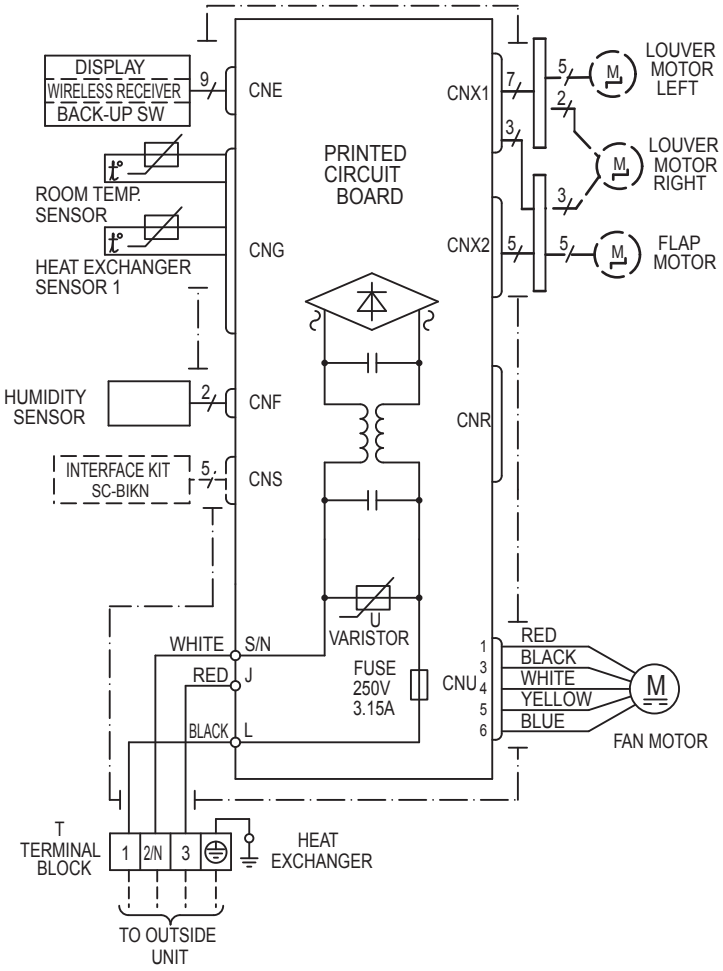




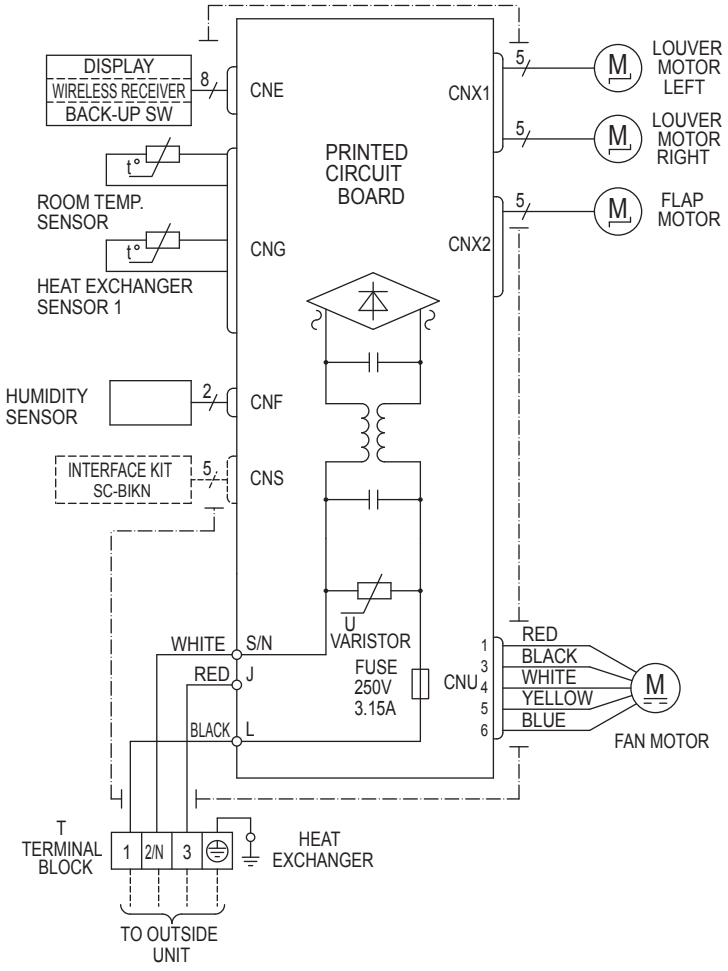
3. ELECTRICAL WIRING

(1) Indoor units

Model SRK19CNS-S



Model SRK25CNS-S



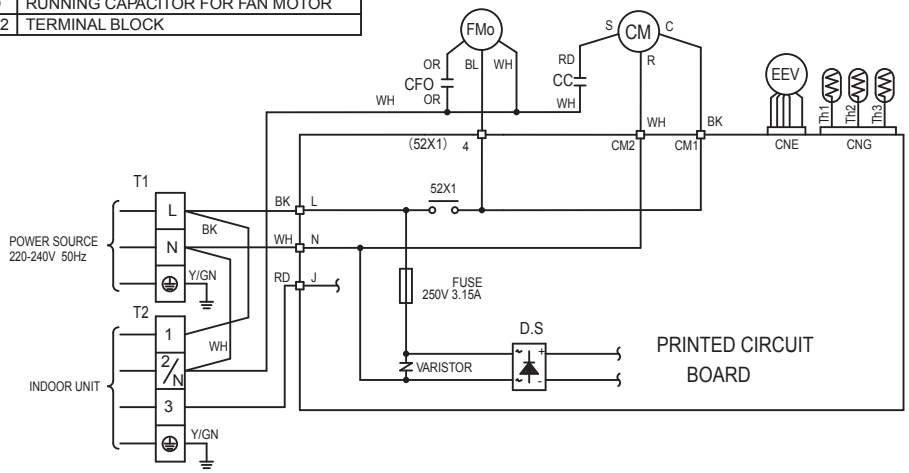
(2) Outdoor units

Model SRC19CNS-S

MEANING OF SYMBOLS

SYMBOL	PARTS NAME
CM	COMPRESSOR MOTOR
FMo	FAN MOTOR
EEV	ELECTRIC EXPANSION VALVE (COIL)
Th1	HEAT EXCHANGER SENSOR
Th2	OUTDOOR AIR TEMP. SENSOR
Th3	DISCHARGE PIPE TEMP. SENSOR
D.S	DIODE STACK
CC	RUNNING CAPACITOR FOR COMPRESSOR
CFO	RUNNING CAPACITOR FOR FAN MOTOR
T1,T2	TERMINAL BLOCK

SYMBOL	COLOR	SYMBOL	COLOR
BK	BLACK	WH	WHITE
BL	BLUE	Y/GN	YELLOW/ GREEN
OR	ORANGE		
RD	RED		



Model SRC25CNS-S

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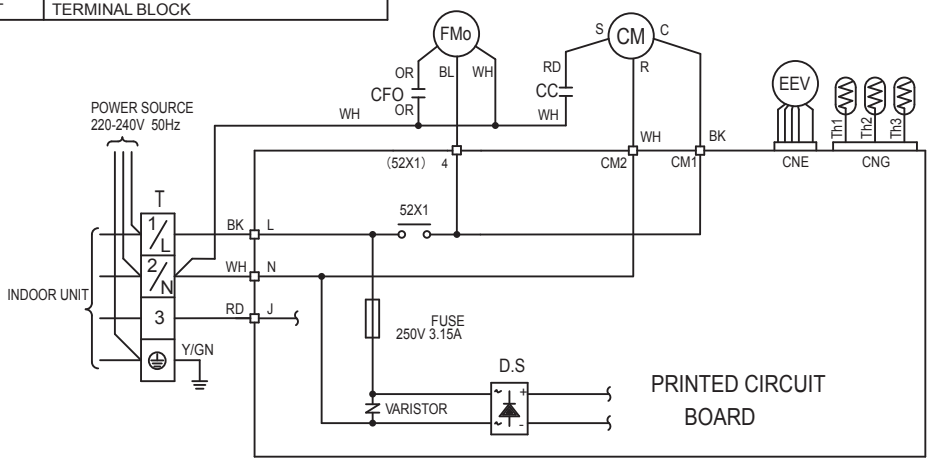
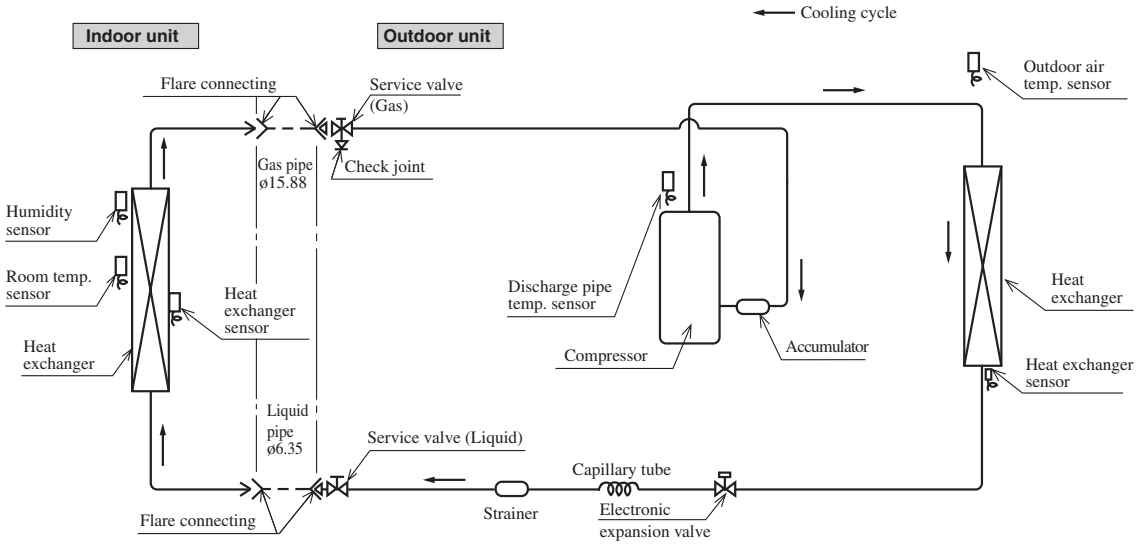
Th3	DISCHARGE PIPE TEMP. SENSOR
D.S	DIODE STACK
CC	RUNNING CAPACITOR FOR COMPRESSOR
CFO	RUNNING CAPACITOR FOR FAN MOTOR
T	TERMINAL BLOCK

SYMBOL	COLOR	SYMBOL	COLOR
BK	BLACK	WH	WHITE
BL	BLUE	Y/GN	YELLOW/ GREEN
OR	ORANGE		
RD	RED		

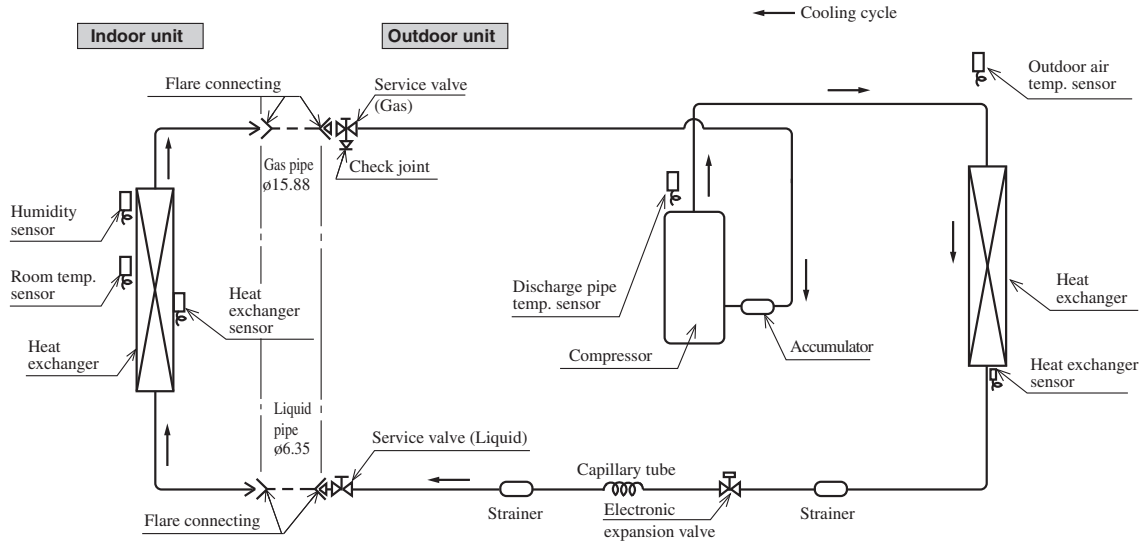


4. PIPING SYSTEM

Model SRK19CNS-S



Model SRK25CNS-S



5. RANGE OF USAGE & LIMITATIONS

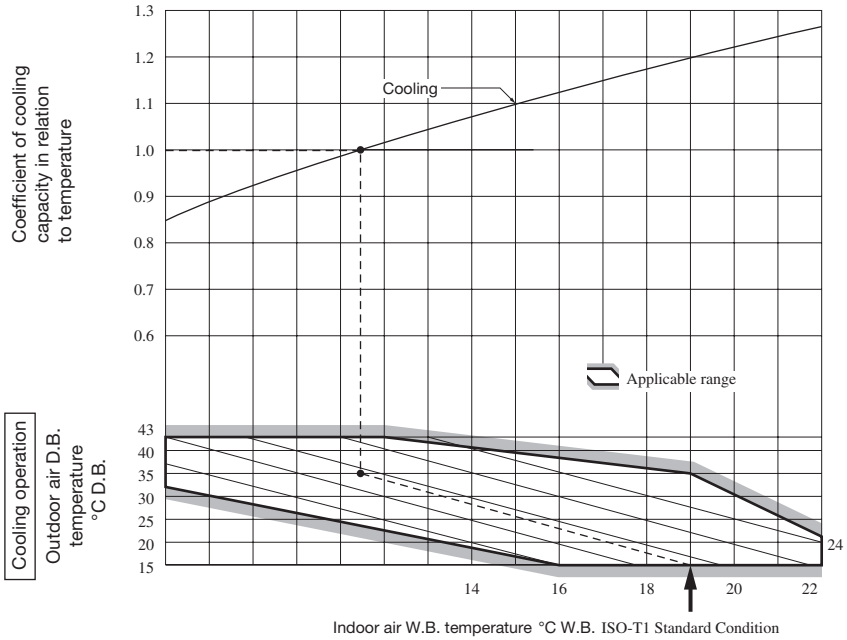
Item \ Models	All models
Indoor return air temperature (Upper, lower limits)	Refer to the selection chart
Outdoor air temperature (Upper, lower limits)	
Refrigerant line (one way) length	Max. 25m
Vertical height difference between outdoor unit and indoor unit	Max. 15m (Outdoor unit is higher) Max. 15m (Outdoor unit is lower)
Power source voltage	Rating ± 10%
Voltage at starting	Min. 85% of rating
Frequency of ON−OFF cycle	Max. 10 times/h
ON and OFF interval	Min. 3 minutes

Selection chart

Correct the cooling capacity in accordance with the conditions as follows. The net cooling capacity can be obtained in the following way.

Net capacity = Capacity shown on specification × Correction factors as follows.

(1) Coefficient of cooling capacity in relation to temperatures



(2) Correction of cooling capacity in relation to one way length of refrigerant piping

It is necessary to correct the cooling capacity in relation to the one way piping length between the indoor and outdoor units.

Piping length [m]	7	10	15	20	25
Cooling	1.0	0.99	0.975	0.965	0.95

How to obtain the cooling capacity

Example : The net cooling capacity of the model SRK19CNS-S with the piping length of 15m, indoor wet-bulb temperature at 19.0˚C and outdoor dry-bulb temperature 35˚C is Net cooling capacity = $\underset{\text{SRK19CNS-S}}{5300} \times \underset{\text{Length 15m}}{0.975} \times \underset{\text{Factor by air temperatures}}{1.0} = 5168$ W

6. APPLICATION DATA

When install the unit, be sure to check whether the selection of installation place, power supply specifications, usage limitation (piping length, height differences between indoor and outdoor units, power supply voltage and etc.) and installation spaces.

WALL TYPE AIR CONDITIONER
R410A REFRIGERANT USED

Safety precautions

- Read the "Safety precautions" carefully first of all and strictly follow it during the installation work in order to protect yourself.
- The precautionary items mentioned below are distinguished into two levels, ⚠ **WARNING** and ⚠ **CAUTION** .
  ⚠ **WARNING** : Wrong installation would cause serious consequences such as injuries or death.
  ⚠ **CAUTION** : Wrong installation might cause serious consequences depending on circumstances.
  Both mentions the important items to protect your health and safety so strictly follow them by any means.
- Be sure to confirm no anomaly on the equipment by commissioning after completed installation and explain the operating methods as well as the maintenance methods of this equipment to the user according to the user's manual.
- Keep the installation manual together with user's manual at a place where any user can read at any time. Moreover if necessary, ask to hand them to a new user.
- For installing qualified personnel, take precautions in respect to themselves by using suitable protective clothing, groves, etc., and then perform the installation works.
- Please pay attention not to fall down the tools, etc. when installing the unit at the high position.
- If unusual noise can be heard during operation, consult the dealer.
- The meanings of "Marks" used here are shown as follows:

⃠	**Never do it under any circumstances.**	❗ ⏚	**Always do it according to the instruction.**

⚠ WARNING

❗

- **Installation must be carried out by the qualified installer.**
  If you install the system by yourself, it may cause serious trouble such as water leaks, electric shocks, fire and personal injury, as a result of a system malfunction. Do not carry out the installation and maintenance work except the by qualified installer.
- **Install the system in full accordance with the installation manual.**
  Incorrect installation may cause bursts, personal injury, water leaks, electric shocks and fire.
- **Be sure to use only for household and residence.**
  If this appliance is installed in inferior environment such as machine shop and etc., it can cause malfunction.
- **Use the original accessories and the specified components for installation.**
  If parts other than those prescribed by us are used, it may cause water leaks, electric shocks, fire and personal injury.
- **Install the unit in a location with good support.**
  Unsuitable installation locations can cause the unit to fall and cause material damage and personal injury.
- **Ensure the unit is stable when installed, so that it can withstand earthquakes and strong winds.**
  Unsuitable installation locations can cause the unit to fall and cause material damage and personal injury.
- **Ventilate the working area well in the event of refrigerant leakage during installation.**
  If the density of refrigerant exceeds the limit, please consult the dealer and install the ventilation system, otherwise lack of oxygen can occur, which can cause serious accident.
- **When installing in small rooms, take prevention measures not to exceed the density limit of refrigerant in the event of leakage, referred by the formula (accordance with ISO5149).**
  If the density of refrigerant exceeds the limit, please consult the dealer and install the ventilation system, otherwise lack of oxygen can occur, which can cause serious accident.
- **After completed installation, check that no refrigerant leaks from the system.**
  If refrigerant leaks into the room and comes into contact with an oven or other hot surface, poisonous gas is produced.
- **Use the prescribed pipes, flare nuts and tools for R410A.**
  Using existing parts (for R22 or R407C) can cause the unit failure and serious accidents due to burst of the refrigerant circuit.
- **Tighten the flare nut by torque wrench with specified method.**
  If the flare nut were tightened with excess torque, this may cause burst and refrigerant leakage after a long period.
- **Do not open the operation valves for liquid line and gas line until completed refrigerant piping work, air tightness test and evacuation.**
  If the compressor is operated in state of opening operation valves before completed connection of refrigerant piping work, air can be sucked into refrigerant circuit, which can cause burst or personal injury due to anomalously high pressure in the refrigerant.
- **The electrical installation must be carried out by the qualified electrician in accordance with "the norm for electrical work" and "national wiring regulation", and the system must be connected to the dedicated circuit.**
  Power supply with insufficient capacity and incorrect function done by improper work can cause electric shocks and fire.
- **Be sure to shut off the power before starting electrical work.**
  Failure to shut off the power can cause electric shocks, unit failure or incorrect function of equipment.
- **Be sure to use the cables conformed to safety standard and cable ampacity for power distribution work.**
  Unconformable cables can cause electric leak, anomalous heat production or fire.
- **This appliance must be connected to main power supply by means of a circuit breaker or switch (fuse 19 series: 20A, 25 series: 25A) with a contact separation of at least 3mm.**
- **When plugging this appliance, a plug conforming to the norm IEC60884-1 must be used.**
- **Use the prescribed cables for electrical connection, tighten the cables securely in terminal block and relieve the cables correctly to prevent overloading the terminal blocks.**
  Loose connections or cable mountings can cause anomalous heat production or fire.
- **Arrange the wiring in the control box so that it cannot be pushed up further into the box. Install the service panel correctly.**
  Incorrect installation may result in overheating and fire.
- **Be sure to fix up the service panels.**
  Incorrect fixing can cause electric shocks or fire due to intrusion of dust or water.
- **Be sure to switch off the power supply in the event of installation, inspection or servicing.**
  If the power supply is not shut off, there is a risk of electric shocks, unit failure or personal injury due to the unexpected start of fan.
- **Stop the compressor before removing the pipe after shutting the service valve on pump down work.**
  If the pipe is removed when the compressor is in operation with the service valve open, air would be mixed in the refrigeration circuit and it could cause explosion and injuries due to abnormal high pressure in the cooling cycle.
- **Only use prescribed option parts. The installation must be carried out by the qualified installer.**
  If you install the system by yourself, it can cause serious trouble such as water leaks, electric shocks, fire.
- **Be sure to wear protective goggles and gloves while at work.**
- **Earth leakage breaker must be installed.**
  If the earth leakage breaker is not installed, it can cause electric shocks.

⃠

- **Do not put the drainage pipe directly into drainage channels where poisonous gases such as sulphide gas can occur.**
  Poisonous gases will flow into the room through drainage pipe and seriously affect the user's health and safety. This can also cause the corrosion of the indoor unit and a resultant unit failure or refrigerant leak.
- **Ensure that no air enters in the refrigerant circuit when the unit is installed and removed.**
  If air enters in the refrigerant circuit, the pressure in the refrigerant circuit becomes too high, which can cause burst and personal injury.
- **Do not bundling, winding or processing for the power cord. Or, do not deforming the power plug due to tread it.**
  This may cause fire or heating.
- **Do not processing, splice the power cord, or share a socket with other power plugs.**
  This may cause fire or electric shock due to defecting contact, defecting insulation and over-current etc.
- **Do not vent R410A into the atmosphere : R410A is a fluorinated greenhouse gas, covered by the Kyoto Protocol with Global Warming Potential (GWP)=1975.**
- **Do not run the unit with removed panels or protections.**
  Touching rotating equipments, hot surfaces or high voltage parts can cause personal injury due to entrapment, burn or electric shocks.
- **Do not perform any change of protective device itself or its setup condition.**
  The forced operation by short-circuiting protective device of pressure switch and temperature controller or the use of non specified component can cause fire or burst.

▮ Safety precautions

⚠ CAUTION

- **Carry out the electrical work for ground lead with care.**
  Do not connect the ground lead to the gas line, water line, lightning conductor or telephone line's ground lead. Incorrect grounding can cause unit faults such as electric shocks due to short-circuiting.

- **Use the circuit breaker of correct capacity. Circuit breaker should be the one that disconnect all poles under over current.**
  Using the incorrect one could cause the system failure and fire.
- **Install isolator or disconnect switch on the power supply wiring in accordance with the local codes and regulations.**
  The isolator should be locked in OFF state in accordance with EN60204-1.
- **Be sure to install indoor unit properly according to the instruction manual in order to run off the drainage smoothly.**
  Improper installation of indoor unit can cause dropping water into the room and damaging personal property.
- **Install the drainage pipe to run off drainage securely according to the installation manual.**
  Incorrect installation of the drainage pipe can cause dropping water into the room and damaging personal property.
- **Be sure to install the drainage pipe with descending slope of 1/100 or more, and not to make traps and air-bleedings.**
  Check if the drainage runs off securely during commissioning and ensure the space for inspection and maintenance.
- **After maintenance, all wiring, wiring ties and the like, should be returned to their original state and wiring route, and the necessary clearance from all metal parts should be secured.**
- **Secure a space for installation, inspection and maintenance specified in the manual.**
  Insufficient space can result in accident such as personal injury due to falling from the installation place.
- **Take care when carrying the unit by hand.**
  If the unit weights more than 20kg, it must be carried by two or more persons. Do not carry by the plastic straps, always use the carry handle when carrying the unit by hand. Use gloves to minimize the risk of cuts by the aluminum fins.
- **Dispose of any packing materials correctly.**
  Any remaining packing materials can cause personal injury as it contains nails and wood. And to avoid danger of suffocation, be sure to keep the plastic wrapper away from children and to dispose after tear it up.
- **For installation work, be careful not to get injured with the heat exchanger, piping flare portion or screws etc.**
- **Be sure to insulate the refrigerant pipes so as not to condense the ambient air moisture on them.**
  Insufficient insulation can cause condensation, which can lead to moisture damage on the ceiling, floor, furniture and any other valuables.
- **When perform the air conditioner operation (cooling or drying operation) in which ventilator is installed in the room. In this case, using the air conditioner in parallel with the ventilator, there is the possibility that drain water may backflow in accordance with the room lapse into the negative pressure status. Therefore, set up the opening port such as incorporate the air into the room that may appropriate to ventilation (For example; Open the door a little). In addition, just as above, so set up the opening port if the room lapse into negative pressure status due to register of the wind for the high rise apartment etc.**
- **Be sure to perform air tightness test by pressurizing with nitrogen gas after completed refrigerant piping work.**
  If the density of refrigerant exceeds the limit in the event of refrigerant leakage in the small room, lack of oxygen can occur, which can cause serious accidents.

- **Do not install the unit in the locations listed below.**
  - Locations where carbon fiber, metal powder or any powder is floating.
  - Locations where any substances that can affect the unit such as sulphide gas, chloride gas, acid and alkaline can occur.
  - Vehicles and ships.
  - Locations where cosmetic or special sprays are often used.
  - Locations with direct exposure of oil mist and steam such as kitchen and machine plant.
  - Locations where any machines which generate high frequency harmonics are used.
  - Locations with salty atmospheres such as coastlines.
  - Locations with heavy snow (If installed, be sure to provide base flame and snow hood mentioned in the manual).
  - Locations where the unit is exposed to chimney smoke.
  - Locations at high altitude (more than 1000m high).
  - Locations with ammonic atmospheres.
  - Locations where heat radiation from other heat source can affect the unit.
  - Locations without good air circulation.
  - Locations with any obstacles which can prevent inlet and outlet air of the unit.
  - Locations where short circuit of air can occur (in case of multiple units installation).
  - Locations where strong air blows against the air outlet of outdoor unit.
  - Locations where something located above the unit could fall.

  It can cause remarkable decrease in performance, corrosion and damage of components, malfunction and fire.
- **Do not install the indoor unit in the locations listed below (Be sure to install the indoor unit according to the installation manual for each model because each indoor unit has each limitation).**
  - Locations with any obstacles which can prevent inlet and outlet air of the unit.
  - Locations where vibration can be amplified due to insufficient strength of structure.
  - Locations where the infrared receiver is exposed to the direct sunlight or the strong light beam (in case of the infrared specification unit).
  - Locations where an equipment affected by high harmonics is placed (TV set or radio receiver is placed within 1m).
  - Locations where drainage cannot run off safely.

  It can affect performance or function and etc.
- **Do not install the outdoor unit in the locations listed below.**
  - Locations where discharged hot air or operating sound of the outdoor unit can bother neighborhood.
  - Locations where outlet air of the outdoor unit blows directly to plants. The outlet air can affect adversely to the plant etc.
  - Locations where vibration can be amplified and transmitted due to insufficient strength of structure.
  - Locations where vibration and operation sound generated by the outdoor unit can affect seriously (on the wall or at the place near bed room).
  - Locations where an equipment affected by high harmonics is placed (TV set or radio receiver is placed within 1m).
  - Locations where drainage cannot run off safely.

  It can affect surrounding environment and cause a claim.
- **Do not install the unit where corrosive gas (such as sulfurous acid gas etc.) or combustible gas (such as thinner and petroleum gases) can accumulate or collect, or where volatile combustible substances are handled.**
  Corrosive gas can cause corrosion of heat exchanger, breakage of plastic parts and etc. And combustible gas can cause fire.
- **Do not install the unit near the location where leakage of combustible gases can occur.**
  If leaked gases accumulate around the unit, it can cause fire.
- **Do not use the indoor unit at the place where water splashes may occur such as in laundries.**
  Since the indoor unit is not waterproof, it can cause electric shocks and fire.
- **Do not install nor use the system close to the equipment that generates electromagnetic fields or high frequency harmonics.**
  Equipment such as inverters, standby generators, medical high frequency equipments and telecommunication equipments can affect the system, and cause malfunctions and breakdowns. The system can also affect medical equipment and telecommunication equipment, and obstruct its function or cause jamming.
- **Do not place any variables which will be damaged by getting wet under the indoor unit.**
  When the relative humidity is higher than 80% or drainage pipe is clogged, condensation or drainage water can drop and it can cause the damage of valuables.
- **Do not install the remote control at the direct sunlight.**
  It can cause malfunction or deformation of the remote control.
- **Do not use the unit for special purposes such as storing foods, cooling precision instruments and preservation of animals, plants or art.**
  It can cause the damage of the items.
- **Do not install the outdoor unit in a location where insects and small animals can inhabit.**
  Insects and small animals can enter the electric parts and cause damage or fire. Instruct the user to keep the surroundings clean.
- **Do not use the base flame for outdoor unit which is corroded or damaged due to long periods of operation.**
  Using an old and damage base flame can cause the unit falling down and cause personal injury.
- **Do not use any materials other than a fuse with the correct rating in the location where fuses are to be used.**
  Connecting the circuit with copper wire or other metal thread can cause unit failure and fire.
- **Do not touch any buttons with wet hands.**
  It can cause electric shocks.
- **Do not touch any refrigerant pipes with your hands when the system is in operation.**
  During operation the refrigerant pipes become extremely hot or extremely cold depending the operating condition, and it can cause burn injury or frost injury.
- **Do not touch the suction or aluminum fin on the outdoor unit.**
  This may cause injury.
- **Do not put anything on the outdoor unit and operating unit.**
  This may cause damage the objects or injury due to falling to the object.
- **Do not use the unit for special purposes such as storing foods, cooling precision instruments and preservation of animals, plants or art.**
- **Do not clean up the unit with water.**

Standard accessories (Installation kit) Accessories for indoor unit		Q'ty
①	Installation board (Attached to the rear of the indoor unit)	1
②	Wireless remote control	1
③	Remote control holder	1
④	Tapping screws (for installation board 4dia. by 25mm)	5 (19) 10 (25)
⑤	Wood screw (for remote control switch holder 3.5dia. by 16mm)	2
⑥	Baterry [R03 (AAA, Micro) 1.5V]	2
⑦	Air-cleaning filters	2
⑧	Filter holders (Attached to the front panel of the indoor unit)	2

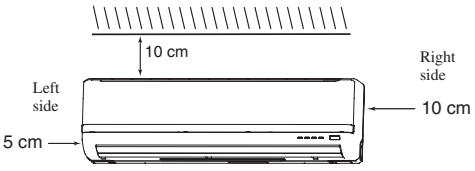
Option parts		Q'ty
ⓐ	Sealing plate	1
ⓑ	Sleeve	1
ⓒ	Inclination plate	1
ⓓ	Putty	1
ⓔ	Drain hose (extention hose)	1
ⓕ	Piping cover (for insulation of connection piping)	1

Necessary tools for the installation work	
1	Plus headed driver (Phillips screwdriver)
2	Knife
3	Saw
4	Tape measure
5	Hammer
6	Spanner wrench
7	Torque wrench (14.0 ~ 82.0N · m / (1.4 ~ 8.2kgf · m))
8	Hole core drill (65mm in diameter)
9	Wrench key (Hexagon) [4m/m]
10	Vacuum pump
11	Vacuum pump adapter (Anti-reverse flow type) (Designed specifically for R410A)
12	Gauge manifold (Designed specifically for R410A)
13	Change hose (Designed specifically for R410A)
14	Flaring tool set (Designed specifically for R410A)
15	Gas leak detector (Designed specifically for R410A)
16	Gauge for projection adjustment (Used when flare is made by using conventional flare tool)
17	Pipe bender

Selection of installation location

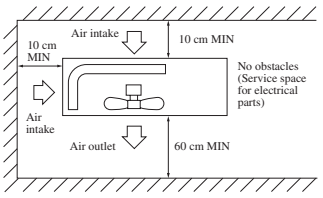
INDOOR UNIT

① Where there is no obstructions to the air flow and where the cooled air can be evenly distributed.
② A solid place where the unit or the wall will not vibrate.
③ A place where there will be enough space for servicing. (Where space mentioned right can be secured)
④ Where wiring and the piping work will be easy to conduct.
⑤ The place where receiving part is not exposed to the direct rays of the sun or the strong rays of the street lighting.
⑥ A place where it can be easily drained.
⑦ A place separated at least 1m away from the television or the radio. (To prevent interfence to images and sounds.)
⑧ A place that home appliance and household goods, etc. aren't below unit.



OUTDOOR UNIT

① A place where good air circulation can be obtained and where rain, snow or sunshine will not directly strike the unit.
② A place where discharged hot air or unit's operating sound will not be a nuisance to the neighborhood.
③ A place where servicing space can be secured.
④ A place where vibration will not be enlarged.
*Avoid installing in the following places.
•A place near the bedroom and the like, so that the operation noise will cause no trouble.
•A place where there is possibility of flammable gas leakage.
•A place exposed to strong wind.
•In a salt-laden atmosphere or a place where the generation of oil mist, vapor or fume is expected.
⑤ Blowing out port and suction port on the back side of the unit can be installed at a distance of 10cm from walls.
(In case the barrier is 1.2m or above in height, or is overhead, the sufficient space between the unit and wall shall be secured.)
⑥ When the unit is installed, the space of the following dimension and above shall be secured.



Note (1) If the wall is higher than 1.2 m or a ceiling is present, distances larger than indicated in the above table must be provided.

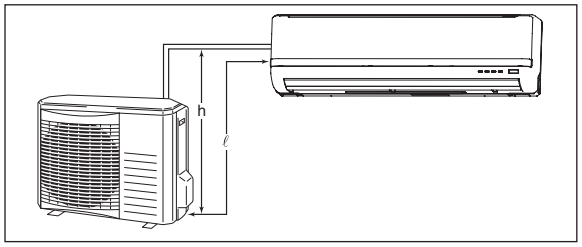
Limitations for one way piping length and vertical height difference

19 Series

Total one way piping length (ℓ)	Max. 25 m
Vertical height difference (h)	Max. 15 m

25 Series

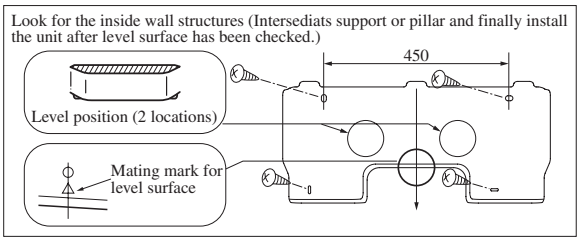
Total one way piping length (ℓ)	Max. 25 m
Vertical height difference (h)	Max. 15 m



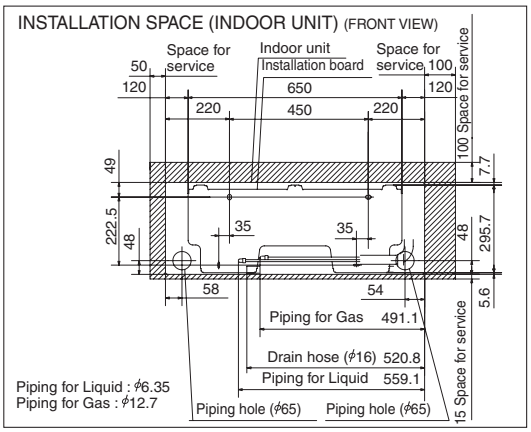
Installation of indoor unit

Installation of installation board

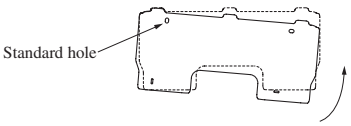
19 Series


Look for the inside wall structures (Intersediats support or pillar and finally install the unit after level surface has been checked.)
450
Level position (2 locations)
Mating mark for level surface

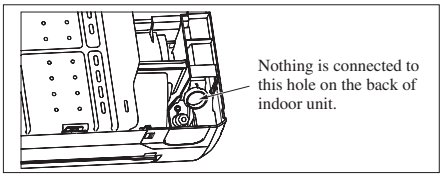
Fixing on concrete wall	
Use of nut anchor	Use of bolt anchor
Bolt (M6×12), Mounting board	Nut (M6), Mounting board, Max.10



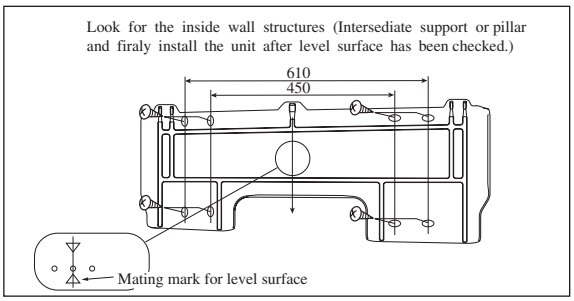
Adjustment of the installation plate in the horizontal direction is to be conducted with four screws in a temporary tightened state.



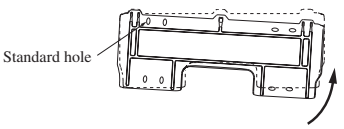
Adjust so the plate will be level by turning the board with the standard hole as the center.



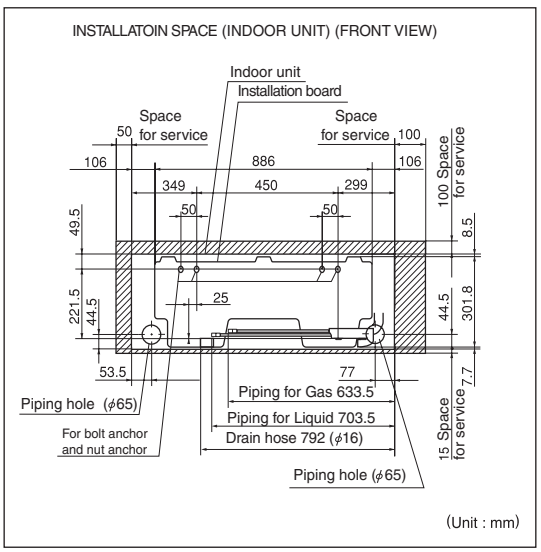
25 Series


Look for the inside wall structures (Intersediate support or pillar and firaly install the unit after level surface has been checked.)
610
450
Mating mark for level surface

- Adjustment of the installation board in the horizontal direction is to be conducted with four screws in a temporary tightened state.

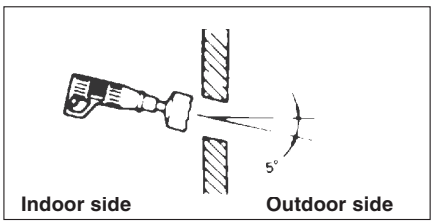


- Adjust so that board will be level by turning the board with the standard hole as the center.

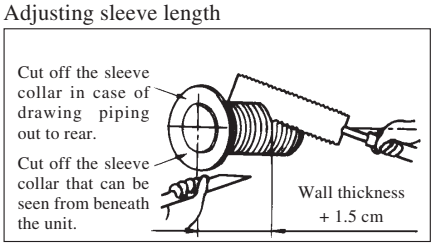


Drilling of holes and fixture sleeve (Option parts)

Drill a hole with ø65 whole core drill



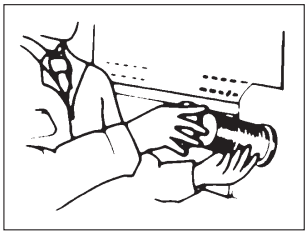
Adjusting sleeve length


Cut off the sleeve collar in case of drawing piping out to rear.
Cut off the sleeve collar that can be seen from beneath the unit.
Wall thickness + 1.5 cm

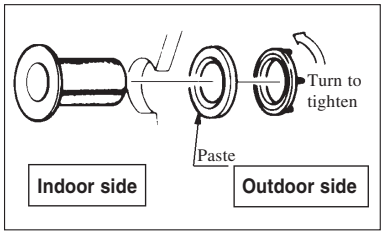
Note (1) Drill a hole with incline of 5 degree from indoor side to outdoor side.

Install the sleeve

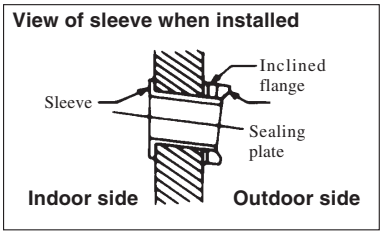
(Inserting sleeve)



(*Sleeve + *Inclined + *Sealing plate)



View of sleeve when installed



Preparation of indoor unit

① Mounting of connecting wires

ⓐ Open the air inlet panel.
ⓑ Remove the lid.
ⓒ Remove the wiring clamp.
ⓓ Connect the connecting wire securely to the terminal block.

Use cable for interconnection wiring to avoid loosening of the wires.
CENELEC code for cables Required field cables.

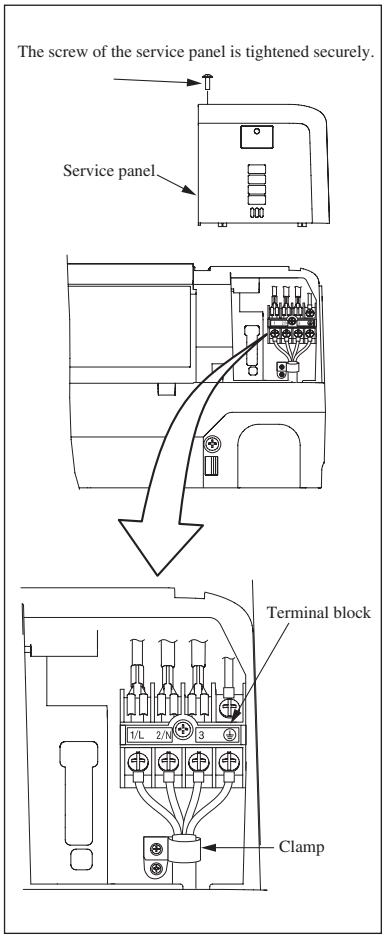
H05RNR4G1.5 (Example) or 245IEC57

H	Harmonized cable type
05	300/500 volts
R	Natural-and/or synth. rubber wire insulation
N	Polychloroprene rubber conductors insulation
R	Standed core
4or5	Number of conductors
G	One conductor of the cables is the earth conductor (yellow/green)
1.5	Section of copper wire (mm^2)

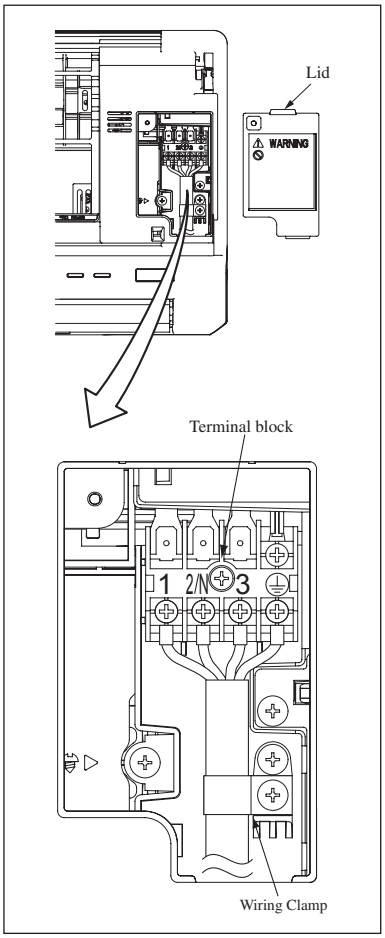
- Connect the connection wire securely to the terminal block. If the wire is not affixed completely, contact will be poor, and it is dangerous as the terminal block may heat up and catch fire.
- Take care not to confuse the terminal numbers for indoor and outdoor connections.
- Earth lead wire shall be longer than the other lead wires for the electrical safety in case of the slipping out of the cord from the anchorage.
- The earth line of power cord must be properly earthed.
- Affix the connection wire using the wiring clamp.

ⓔ Fix the connecting wire by wiring clamp.
ⓕ Attach the lid.
ⓖ Close the air inlet panel.

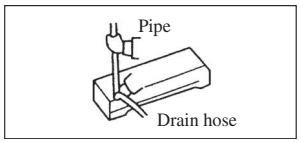
19 Series



25 Series

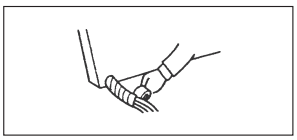


② Shaping the pipe



- Hold the bottom of the pipe and change its direction before stretching it and shaping it.

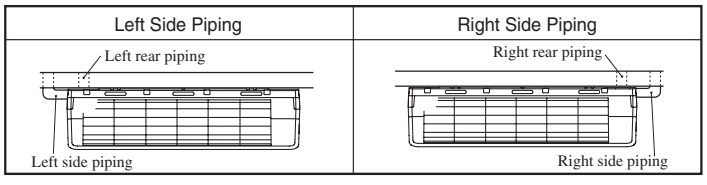
③ Taping of the exterior



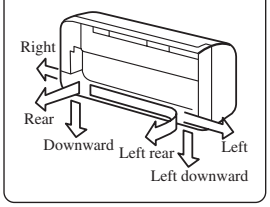
- Tape only the portion that runs through the wall. Always tape the crossover wires with the pipe.

④ Cautions when piping from the left and the rear center of the unit

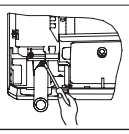
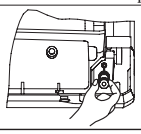
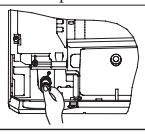
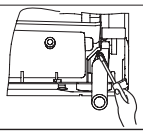
[Top View]



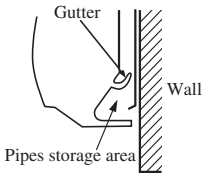
Piping is possible in the rear, left, left rear, left downward, right or downward direction.



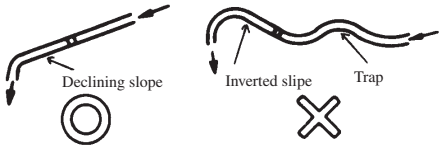
[Drain hose changing procedures]

1. Remove the drain hose.	2. Remove the drain cap.	3. Insert the drain cap.	4. Connect the drain hose.
			
• Remove the screw and drain hose, making it rotate.	• Remove it with hand or pliers.	• Insert the drain cap which was removed at procedure "2" securely using a hexagonal wrench etc. Note: Be careful that If it is not Inserted securely, water leakage may occur.	• Insert the drain hose securely, making rotate. And install the screw. Note: Be careful that If it is not Inserted securely, water leakage may occur.

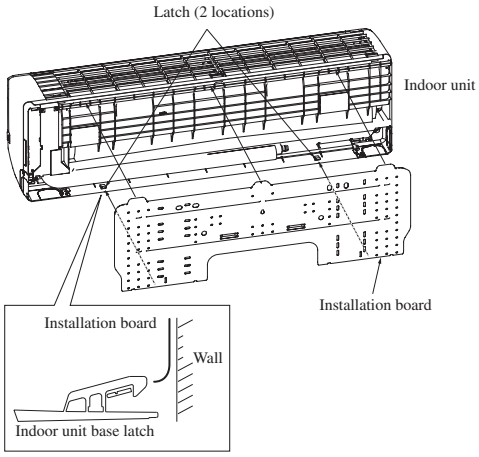
- Do not place the power supply cords above the gutter, because the air conditioner is structured in a way where condensation on the back side is collected in to the drain pan before drainage.

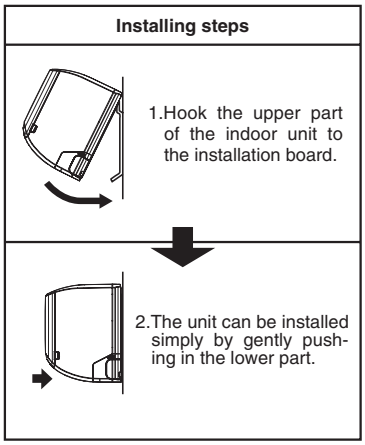


- Do not make traps in the drain hose line.



⑤ Securing the indoor unit to the installation board

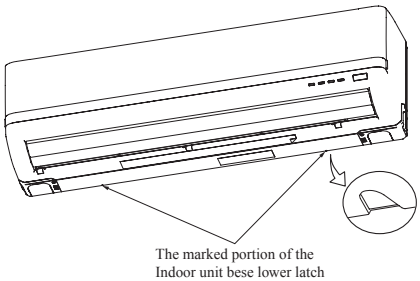



Installing steps
1.Hook the upper part of the indoor unit to the installation board.
2.The unit can be installed simply by gently push-ing in the lower part.

● How to remove the indoor unit from the installation board

① Push up at the marked portion of the indoor unit base lower latch, and slightly pull it toward you.
(both right and left hand sides)
(The indoor unit base lower latch can be removed from the installation board)

② Push up the indoor unit upward. So the indoor unit will be removed from the installation board.

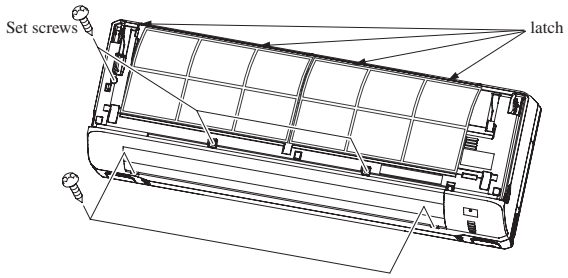


Removal and installation of the front panel

19 Series

① Removing
- Remove the air inlet panel.
- Remove the 5 set screws.
- Remove the 4 latches in the upper section.
- Move the lower part of the panel forward and puch upwards to remove.

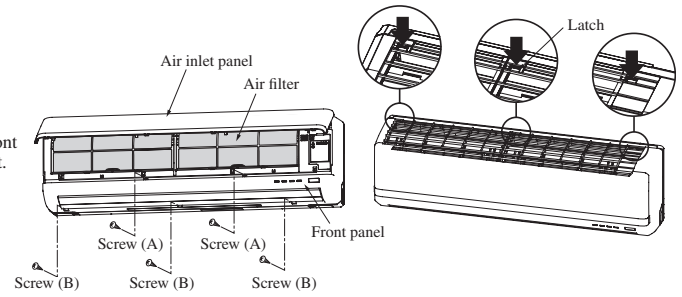
② Installing
- Remove the air filter.
- Cove the unit with the front panel.
- Install the 4 latches in the upper section.
- Tighten the 5 set screws.
- Install the air filter.
- Install the air inlet panel.



25 Series

① Removing
- Remove the air inlet panel.
- Remove the screw(A) 2pcs/screw(B) 3pcs fixing to the front panel.
- Remove the 3 latches in the upper section of the front panel and then remove the front panel from the unit.

② Installing
- Remove the air filter.
- Cover the unit with the front panel.
- Tighten the screw(A) 2pcs/screw(B) 3pcs to fix the front panel.
- Install the air filter.
- Install the air inlet panel.



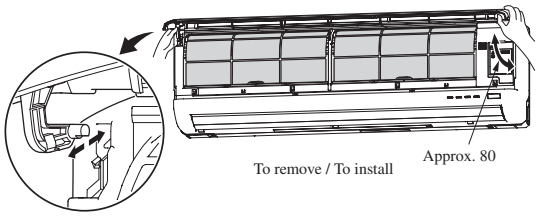
Open/close and detachment/attachment of air inlet panel

① To open, pull the panel at both ends of lower part and release latches, then pull up the panel until you feel resistance. (The air inlet panel stops at approx. 60˚ open position.)

② To close, hold the panel at both ends of lower part to lower downward and push it slightly until the latch works, then push the center portion slightly.

③ To remove, pull up the panel to the position shown in right illustration and pull it toward you.

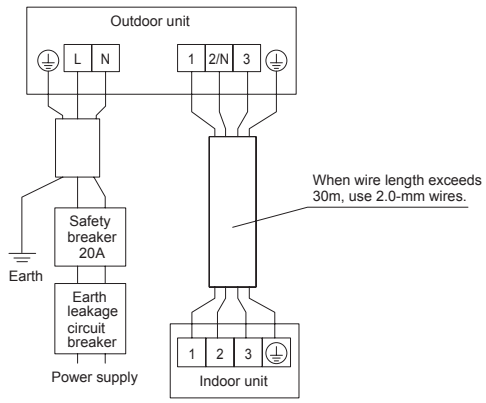
④ To install, insert the air inlet panel arm into the slot on the front panel from the position shown in right illustration, hold the panel at both ends of lower part, lower it downward slowly, then push it slightly until the latch works and further push the center portion slightly.



Installation of outdoor unit

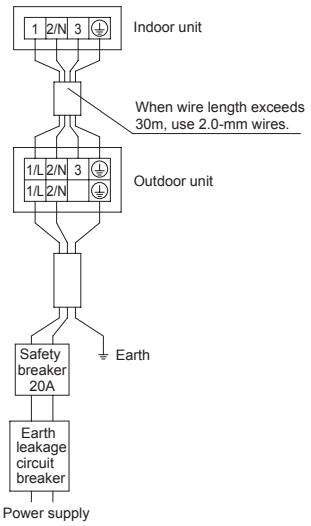
① Make sure that the unit is stable in installation. Fix the unit to stable base.
② When installing the unit at a higher place or where it could be toppled by strong winds, secure the unit firmly with foundation bolts, wire, etc.
③ Perfrom wiring, making wire terminal numbers conform to terminal numbers of indoor unit terminal block.
④ Earth lead wire shall be longer than the other lead wires for the electrical safety in case of the slipping out of the cord from the anchorage. Connect using ground screw located near ⏚ mark.

SRC19CNS-S



(POWER SUPPLY CODE)
CENELEC code for cables requiring fields cables.
H05RNR3G2.5

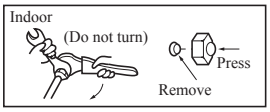
SRC25CNS-S



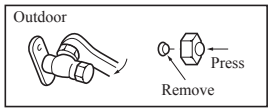
Connection of refrigerant pipings

Preparation

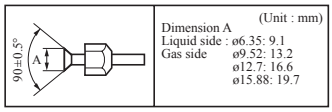
Keep the openings of the pipes covered with tapes etc. to prevent dust, sand, etc. from entering them.



○Remove the flared nuts.
(on both liquid and gas sides)



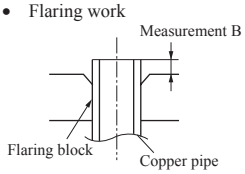
○Remove the flared nuts.
(on both liquid and gas sides)



○Install the removed flared nuts to the pipes to be connected, then flare the pipes.

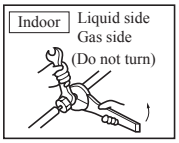
⚠ CAUTION
- Do not apply refrigerating machine oil to the flared surface.

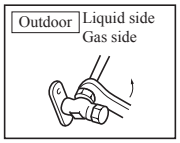
- Flaring work



Copper pipe diameter	Measurement B (mm)			Use a flare tool designed for R410A or a conventional flare tool. Please note that measurement B (protrusion from the flaring block) will vary depending on the type of a flare tool in use. If a conventional flare tool is used, please use a copper pipe gauge or a similar instrument to check protrusion so that you can keep measurement B to a correct value.
	Clutch type flare tool for R410A	Conventional (R22) flare tool		
		Clutch type	Wing nut type	
ϕ 6.35	0.0~0.5	1.0~1.5	1.5~2.0	
ϕ 9.52	0.0~0.5	1.0~1.5	1.5~2.0	
ϕ 12.7	0.0~0.5	1.0~1.5	2.0~2.5	
ϕ 15.88	0.0~0.5	1.0~1.5	2.0~2.5	

Connection of refrigerant piping





○Connect the pipes on both liquid and gas sides.
○Tighten the nuts to the following torque.

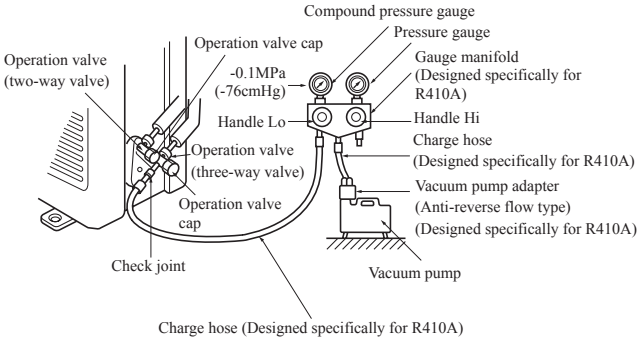
		N·m	(kgf·m)
Liquid side	(ϕ 6.35)	14.0 ~ 18.0	(1.4~1.8)
Gas side	(ϕ 9.52)	34.0 ~ 42.0	(3.4~4.2)
	(ϕ 12.7)	49.0 ~ 61.0	(4.9~6.1)
	(ϕ 15.88)	68.0 ~ 82.0	(6.8~8.2)

⚠ CAUTION
- Do not apply excess torque to the flared nuts.
  Otherwise, the flared nuts may crack depending on the conditions and refrigerant leak may occur.

Air purge

① Tighten all flare nuts in the pipings both indoor and outside wall so as not to cause leak.
② Connect operation valve, charge hose, manifold valve and vacuum pump as is illustrated right.
③ Open manifold valve handle Lo to its full width, and perform vacuum or evacuation.
Continue the vacuum or evacuation operation for 15 minutes or more and check to see that the vacuum gauge reads -0.1MPa.
④ After completing vacuum operation, close the Lo handle and stop operation of the vacuum pump.
⑤ After completing vacuum operation, fully open operation valve (Both gas and liquid sides) with hexagon headed wrench.
⑥ Check for possible leakage of gas in the connection parts of both indoor and outdoor.

- Since the system uses check joints differing in diameter from those found on the conventional models, a charge hose (for R22) presently in use is not applicable. Please use one designed specifically for R410A.
- Please use an anti-reverse flow type vacuum pump adapter so as to prevent vacuum pump oil from running back into the system. Oil running back into an air-conditioning system may cause the refrigerant cycle to break down.



Securely tighten the operation valve cap and the check joint blind nut after adjustment.

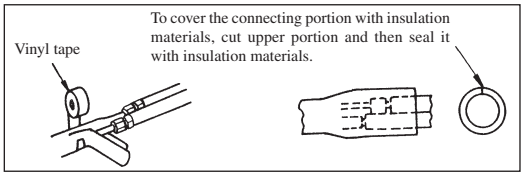
Operation valve size (mm)	Operation valve cap tightening torque (N·m)	Check joint blind nut tightening torque (N·m)
ϕ6.35 (1/4")	20 ~ 30	10 ~ 12
ϕ9.52 (3/8")		
ϕ12.7 (1/2")	25 ~ 35	
ϕ15.88 (5/8")	30 ~ 40	

♦ Additional refrigerant charge

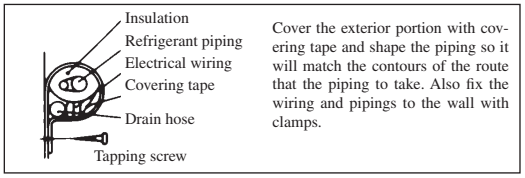
Additional refrigerant	Less than 15m : Not required More than 15m : 20g/m

Insulation of connecting portion

① Cover the connection portion of the refrigerant piping with the pipe cover and seal them.
If neglecting to do so, moisture occurs on the piping and water will drip out.


To cover the connecting portion with insulation materials, cut upper portion and then seal it with insulation materials.
Vinyl tape

② Finishing and fixing
ⓐ Tie up the piping with wrapping tape, and shape it so that it conforms to which the pipe is attached.
ⓑ Fix them with clamps as right figure.


Insulation
Refrigerant piping
Electrical wiring
Covering tape
Drain hose
Tapping screw
Cover the exterior portion with covering tape and shape the piping so it will match the contours of the route that the piping to take. Also fix the wiring and pipings to the wall with clamps.

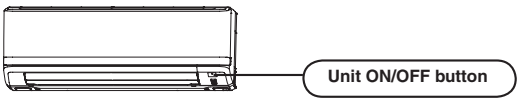
How to relocate or dispose of the unit

- In order to protect the environment, be sure to pump down (recovery of refrigerant).
- Pump down is the method of recovering refrigerant from the indoor unit to the outdoor unit when the pipes are removed from the unit.

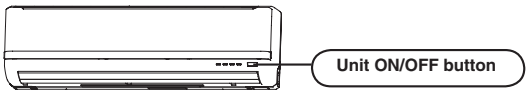
<How to pump down>
① Connect charge hose to check joint.
② Liquid side : Close the liquid valve with hexagon wrench key.
Gas side : Fully open the gas valve.
Carry out cooling operation. (If indoor temperature is low, operate forced cooling operation.)
③ After low pressure gauge become 0.01MPa, close the gas valve then stop cooling operation.

- Forced cooling operation
Turn on a power supply again after a while after turn off a power supply. Then press continually the ON/OFF button 5 seconds or more.

19 Series



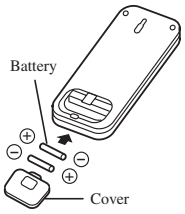
25 Series



Installation of remote control switch

Mounting method of battery

- Uncover the remote control switch, and mount the batteries [R03(AAA, Micro)×2 pieces] in the body regularly. (Fit the poles with the indication marks, ⊕ & ⊖ without fail)

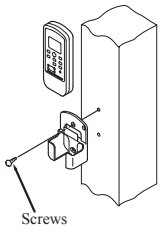


⚠ CAUTION

Do not use new and old batteries together.

Fixing to pillar or wall

- Conventionally, operate the wireless remote control by holding in your hand.
- Avoid installing it on a clay wall etc.



Earthing work

- Earth work shall be carried out without fail in order to prevent electric shock and noise generation.
- The connection of the earth cable to the following substances causes dangerous failures, therefore it shall never be done.
  City water pipe, Town gas pipe, TV antenna, lightning conductor, telephone line, etc.

Trial run and operation

① Conduct trial run after confirming that there is no gas leaks.
② When conducting trial run set the remote control thermostat to continuous operation position. However when the power source is cut off or when the unit's operation switch is turned off or was turned to fan operation position, the unit will not go into operation in order to protect the compressor.
③ Explain to the customer on the correct usage of the air-conditioner in simple layman's terms.
④ Make sure that drain flows properly.

Installations test check points

Check the following points again after completion of the installation, and before turning on the power. Conduct a test run again and ensure that the unit operates properly.
At the same time, explain to the customer how to use the unit and how to take care of the unit following the instruction manual.

After installation

- ☐ The power supply voltage is correct as the rating.
- ☐ No gas leaks from the joints of the operation valve.
- ☐ Operation valve is fully open.
- ☐ The pipe joints for indoor and outdoor pipes have been insulated.

Test run

- ☐ Air conditioning operation is normal.
- ☐ No abnormal noise.
- ☐ Water drains smoothly.
- ☐ Protective functions are not working.
- ☐ The remote control is normal.
- ☐ Operation of the unit has been explained to the customer.

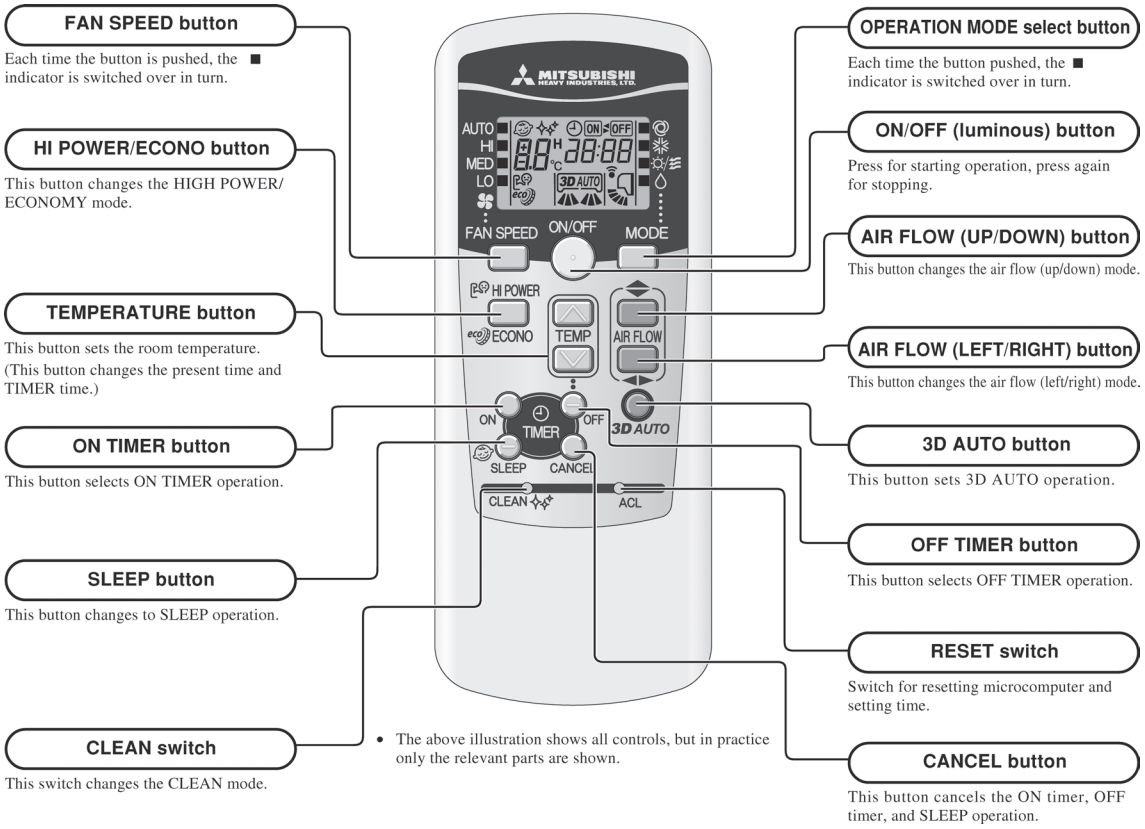
(Three-minute restart preventive timer)
When the air conditioner is restarted or when changing the operation, the unit will not start operating for approximately 3 minutes. This is to protect the unit and it is not a malfunction.

7. OUTLINE OF OPERATION CONTROL BY MICROCOMPUTER

(1) Operation control function by remote control

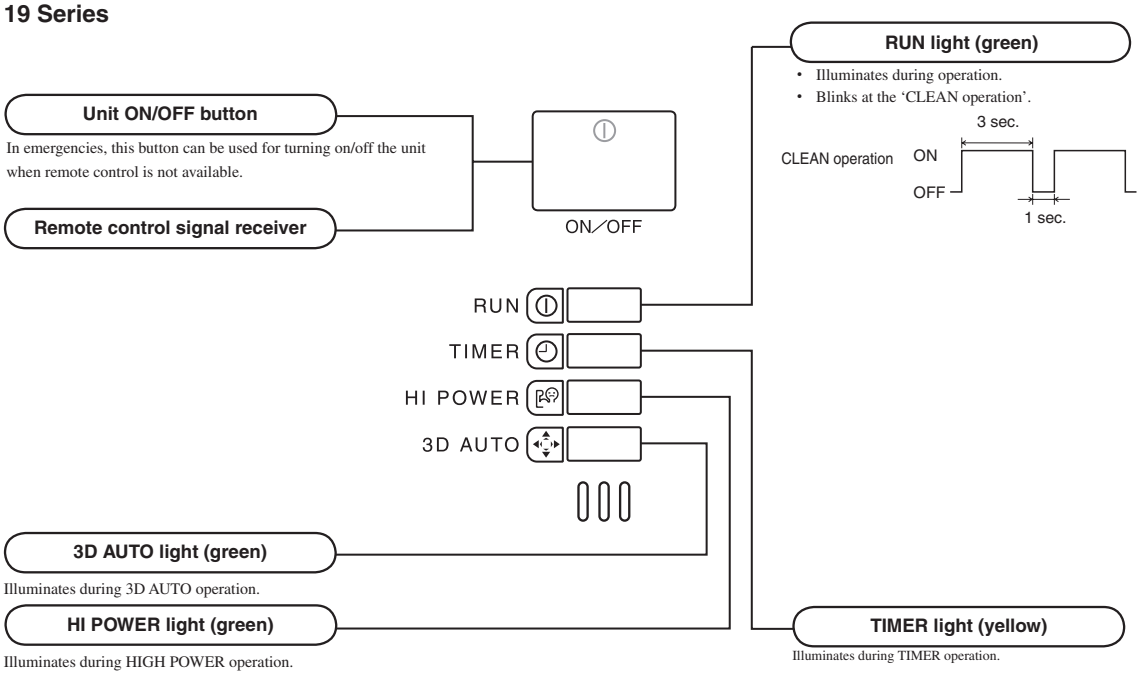
Remote control

◆ Operation section

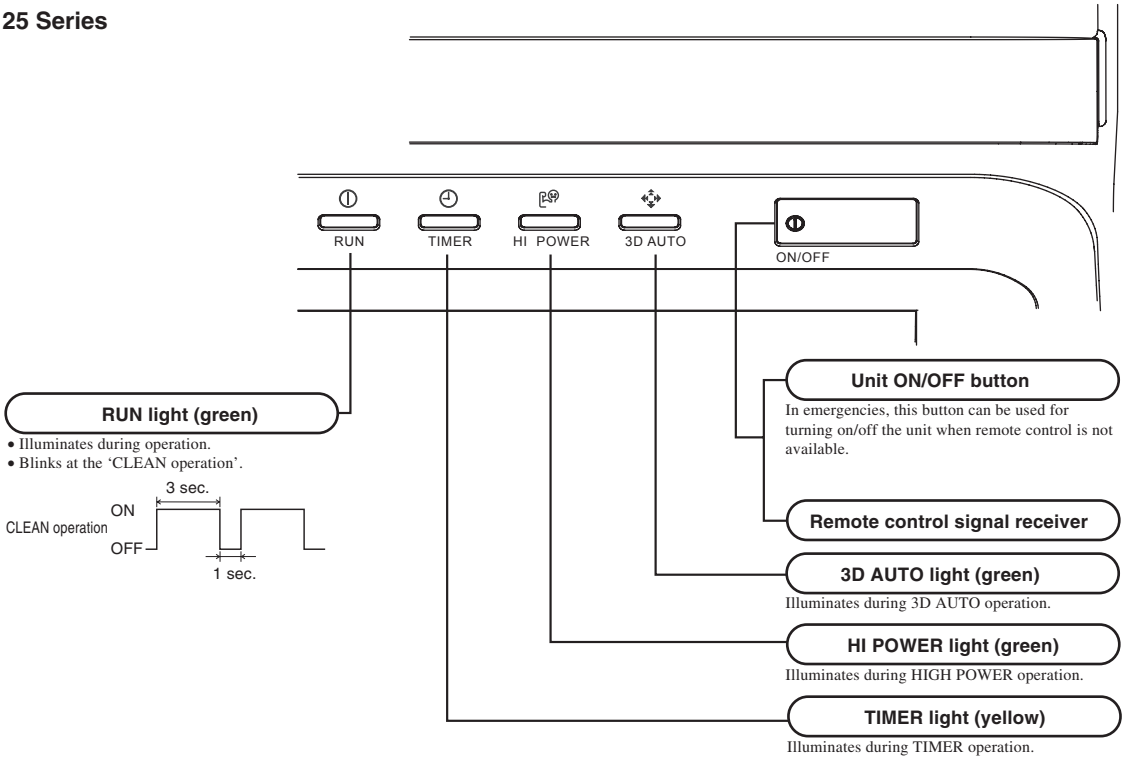

FAN SPEED button
Each time the button is pushed, the ■ indicator is switched over in turn.
HI POWER/ECONO button
This button changes the HIGH POWER/ ECONOMY mode.
TEMPERATURE button
This button sets the room temperature. (This button changes the present time and TIMER time.)
ON TIMER button
This button selects ON TIMER operation.
SLEEP button
This button changes to SLEEP operation.
CLEAN switch
This switch changes the CLEAN mode.
OPERATION MODE select button
Each time the button pushed, the ■ indicator is switched over in turn.
ON/OFF (luminous) button
Press for starting operation, press again for stopping.
AIR FLOW (UP/DOWN) button
This button changes the air flow (up/down) mode.
AIR FLOW (LEFT/RIGHT) button
This button changes the air flow (left/right) mode.
3D AUTO button
This button sets 3D AUTO operation.
OFF TIMER button
This button selects OFF TIMER operation.
RESET switch
Switch for resetting microcomputer and setting time.
CANCEL button
This button cancels the ON timer, OFF timer, and SLEEP operation.
• The above illustration shows all controls, but in practice only the relevant parts are shown.
MITSUBISHI HEAVY INDUSTRIES, LTD.
AUTO
HI
MED
LO
FAN SPEED
ON/OFF
MODE
HI POWER
ECONO
TEMP
AIR FLOW
ON
OFF
TIMER
SLEEP
CANCEL
3D AUTO
CLEAN
ACL

Unit display section

19 Series



25 Series



(2) Unit ON/OFF button

When the remote control batteries become weak, or if the remote control is lost or malfunctioning, this button may be used to turn the unit on and off.

(a) Operation

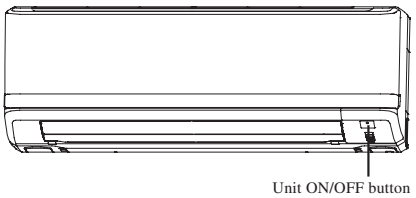
Push the button once to place the unit in the automatic mode. Push it once more to turn the unit off.

(b) Details of operation

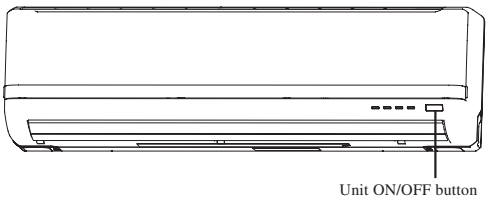
The unit will go into the automatic mode in which it automatically determines, from indoor temperature (as detected by sensor), whether to go into the cooling or thermal dry modes.

Function / operation mode	Room temperature setting	Fan speed	Flap/Louver	Timer Switch
COOL	About 24ºC	Auto	Auto	Continuous
DRY				

19 Series



25 Series



(3) Auto restart function

(a) Auto restart function records the operational status of the air-conditioner immediately prior to be switched off by a power cut, and then automatically resumes operations after the power has been restored.

(b) The following settings will be cancelled:

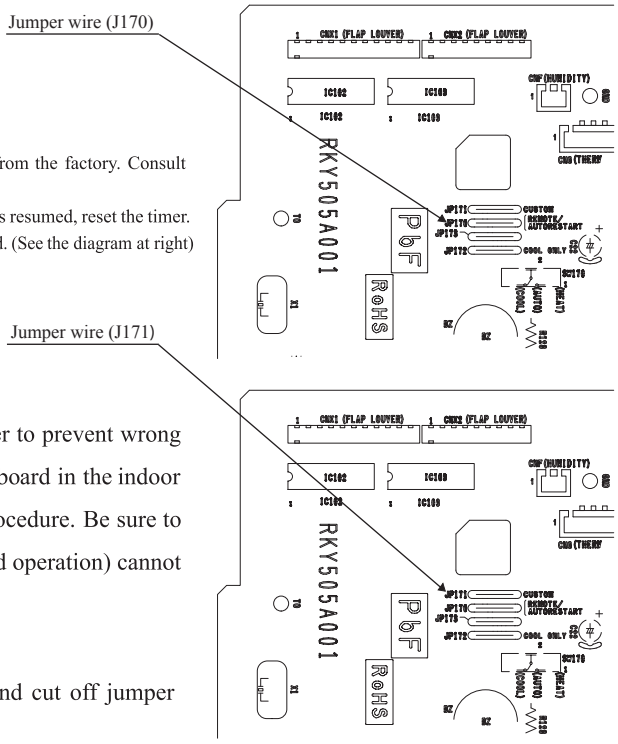
(i) Timer settings

(ii) HIGH POWER operations

Notes (1) Auto restart function is set at on when the air-conditioner is shipped from the factory. Consult with your dealer if this function needs to be switched off.

(2) When power failure ocurrs, the timer setting is cancelled. Once power is resumed, reset the timer.

(3) If the jumper wire (J170) "AUTO RESTART" is cut, auto restart is disabled. (See the diagram at right)



(4) Custom cord switching procedure

If two wireless remote control are installed in one room, in order to prevent wrong operation due to mixed signals, please modify the printed circuit board in the indoor unit's control box and the remote control using the following procedure. Be sure to modify both boards. If only one board is modified, receiving (and operation) cannot be done.

(a) Modifying the indoor printed circuit board

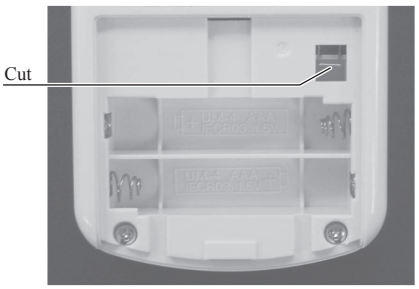
Take out the printed circuit board from the control box and cut off jumper wire (J171) using wire cutters.

After cutting of the jumper wire, take measures to prevent contact with the other the lead wires, etc.

(b) Modifying the wireless remote control

(i) Remove the battery.

(ii) Cut the jumper wire shown in the figure at right.

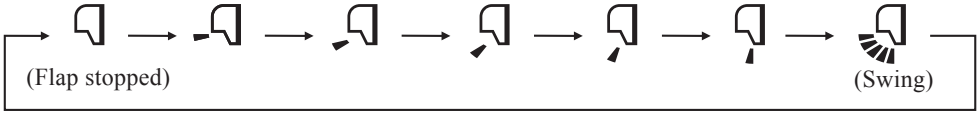


(5) Flap and louver control

Control the flap and louver by AIR FLOW ⬍ (UP/DOWN) and ⬌ (LEFT/RIGHT) button on the wireless remote control.

(a) Flap

Each time when you press the AIR FLOW ⬍ (UP/DOWN) button the mode changes as follows.



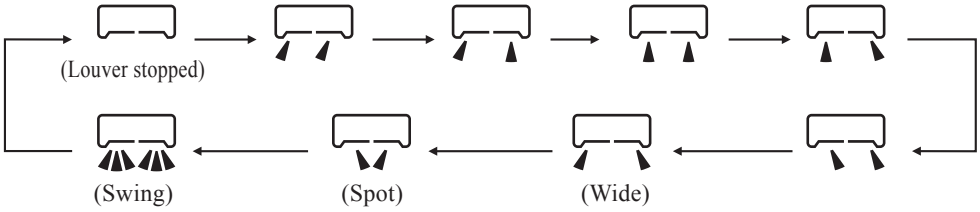
• Angle of Flap from Horizontal

Remote control display					
COOL , DRY, FAN	Approx. 5°(10°)	Approx. 15°(20°)	Approx. 30°	Approx. 45°	Approx. 60°

Note (1) Values in ( ) are for the 25 Series.

(b) Louver

Each time when you press the AIR FLOW ⬌ (LEFT/RIGHT) button the mode changes as follows.



• Angle of Louver

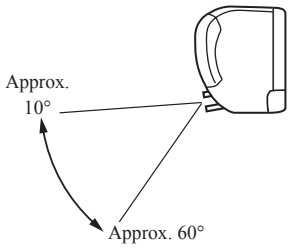
Remote control display					
Center installation	Left Approx. 45°	Left Approx. 20°	Center	Right Approx. 20°	Right Approx. 45°
Right end installation	Left Approx. 45°	Left Approx. 30°	Left Approx. 20°	Center	Right Approx. 20°
Left end installation	Left Approx. 20°	Center	Right Approx. 20°	Right Approx. 30°	Right Approx. 45°

(c) Swing

(i) Swing flap

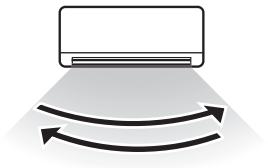
Flap moves in upward and downward directions continuously.

◆ In COOL, DRY, FAN operation



(ii) Swing louver

Louver moves in left and right directions continuously.



(d) Memory flap (Flap or Louver stopped)

When you press the AIR FLOW (UP/DOWN or LEFT/RIGHT) button once while the flap or louver is operating, it stops swinging at the position. Since this angle is memorized in the microcomputer, the flap or louver will automatically be set at this angle when the next operation is started.

(e) When not operating

The flap returns to the position of air flow directly below, when operation has stopped.

(6) 3D auto operation

Control the flap and louver by 3D AUTO button on the wireless remote control.

Air flow selection and air flow direction are automatically controlled, allowing the entire indoor to efficiently conditioned.

(a) During Cooling (Including auto cooling)

(i) Air flow selection is determined according to indoor temperature and setting temperature.

Operation mode	Air flow selection				
	AUTO		HI	MED	LO
Cooling	Indoor temp. – Setting temp. >5°C	Indoor temp. – Setting temp. ≦ 5°C	HI	MED	LO
	HIGH POWER	AUTO			

(ii) Air flow direction is controlled according to the indoor temperature and setting temperature.

1) When 3D auto operation starts

	Cooling
Flap	Up/down Swing
Louver	Wide (Fixed)

2) When Indoor temp. – Setting temp. is ≦ 5ºC during cooling, the system switches to the following air flow direction control. After the louver swings left and right symmetrically for 3 cycles, control is switched to the control in 3).

	Cooling
Flap	Horizontal blowing (Fixed)
Louver	Left/right Swing

3) After the flap swings for 5 cycles, control is switched to the control in 4).

	Cooling
Flap	Up/down Swing
Louver	Center (Fixed)

4) For 5 minutes, the following air flow direction control is carried out.

	Cooling
Flap	Horizontal blowing (Fixed)
Louver	Wide (Fixed)

5) After 5 minutes have passed, the air flow direction is determined according to the indoor temperature and setting temperature.

Operation mode	Air flow direction contorol		
Cooling	Indoor temp. – Setting temp. ≦ 2°C	2°C < Indoor temp. – Setting temp. ≦ 5°C	Indoor temp. – Setting temp. > 5°C
	The control in 4) continues.	Control returns to the control in 2).	Control returns to the control in 1).

(b) During DRY Operation (including auto DRY operation)

Flap	Horizontal blowing (Fixed)
Louver	Wide (Fixed)

(7) Timer operation

(a) Comfortable timer setting (ON timer)

If the timer is set at ON when the operation select switch is set at the cooling, or the cooling in auto mode operation is selected, the comfortable timer starts and determines the starting time of next operation based on the initial value of 15 minutes and the relationship between the indoor temperature at the setting time (temperature of room temperature sensor) and the setting temperature.

(b) Sleep timer operation

Pressing the SLEEP button causes the temperature to be controlled with respect to the set temperature.

(c) OFF timer operation

The Off timer can be set at a specific time (in 10-minute units) within a 24-hour period.

(8) Installation location setting

When the indoor unit is installed at the end of a room, control the air flow direction so that it is not toward the side walls. If you set the remote control installation position, keep it so that the air flow is within the range shown in the following figure.

(a) Setting

(i) If the air conditioning unit is running, press the ON/OFF button to stop.

The installation location setting cannot be made while the unit is running.

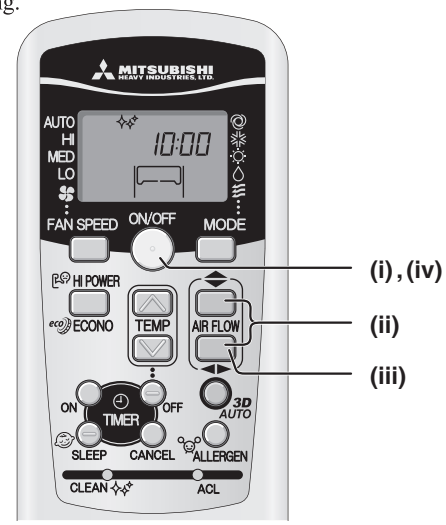
(ii) Press the AIR FLOW ⬍ (UP/DOWN) button and the AIR FLOW ⬌ (LEFT/RIGHT) button together for 5 seconds or more.

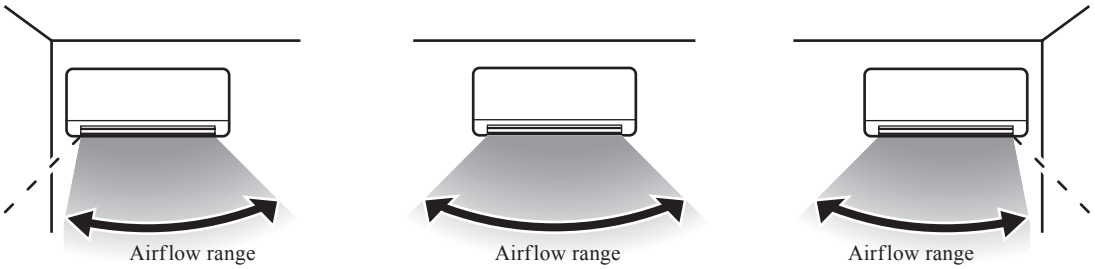
The installation location display illuminates.

(iii) Setting the air-conditioning installation location.

Press the AIR FLOW ⬌ (LEFT/RIGHT) button and adjust to the desired location.

Each time the AIR FLOW ⬌ (LEFT/RIGHT) button is pressed, the indicator is switched in the order of:





(Left End Installation) (Center Installation) (Right End Installation)

(iv) Press the ON/OFF button.

The air-conditioner's installation location is set.

Press within 60 seconds of setting the installation location (while the installation location setting display illuminates).

(9) Outline of cooling operation

(a) Operation of major functional components in Cooling mode

	Cooling		
	Thermostat ON	Thermostat OFF	Failure
Compressor	ON	OFF	OFF
Indoor fan motor	ON	ON	ON
Outdoor fan motor	ON	OFF (few minutes ON)	OFF (few minutes ON)

(b) Fan speed switching

Model / Fan speed	All models
Auto	Auto fan control
HI	Speed 8
MED	Speed 6
LO	Speed 4

(10) Outline of automatic operation

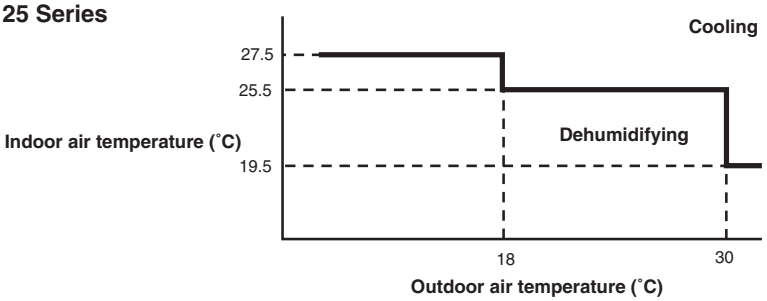
(a) Determination of operation mode

The unit checks the indoor air temperature and the outdoor air temperature, determines the operation mode, and then begins in the automatic operation.

19 Series

	Room temperature＜25.5℃	25.5℃ ≦ Room temperature
Operation mode	Dehumidifying	Cooling

25 Series



(b) The unit checks the temperature every 30 minutes after the start of operation and, if the result of check is not same as the previous operation mode, changes the operation mode.

(c) When the unit is started again within one hour after the stop of automatic operation or when the automatic operation is selected during cooling or dehumidifying operation, the unit is operated in the previous operation mode.

(d) Setting temperature can be adjusted within the following range. There is the relationship as shown below between the signals of the wireless remote control and the setting temperature.

		Signals of wireless remote control (Display)												
		–6	–5	–4	–3	–2	–1	±0	+1	+2	+3	+4	+5	+6
Setting temperature	Cooling	18	19	20	21	22	23	24	25	26	27	28	29	30
	Dehumidifying	18	19	20	21	22	23	24	25	26	27	28	29	30

(11) Protective control function

(a) Frost prevention for indoor heat exchanger (During cooling or dehumidifying)

(i) Operating conditions

1) Indoor heat exchanger temperature (Th2) is lower than 2.5ºC.
2) 3 minutes elapsed after the start of operation.

(ii) Detail of frost prevention operation

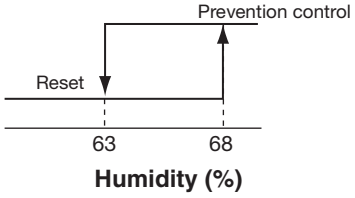
Compressor	OFF
Indoor fan	Protects the fan tap just before frost prevention control.
Outdoor fan	Depending on the stop mode

(iii) Reset condition: Indoor heat exchanger temperature (Th2) is higher than 15ºC.

(b) Dew condensation prevention control [Cooling (including auto), cooling oriented dehumidifying operation]

(i) Operating condition: When the following conditions are met after 5 minutes or more of continuous operation after operation starts.

- The humidity sensor value is 68% or higher



(ii) Operation contents

1) Command of the electronic expansion valve.
2) When such a command is continued for 30 minutes or more, air direction controls will be as listed below:

UP/ DOWN air flow	Flap swing	Executes the command to the left.
	Situations besides the ones described above	Controls the level of the UP/DOWN flap.
LEFT/ RIGHT air flow	Louver swing	Executes the command to the left.
	Situations besides the ones described above	Controls the front of the LEFT/RIGHT louver .

(iii) Reset condition: When the following condition is satisfied.

- The humidity sensor value is less than 63%.

(c) Indoor fan motor protection

When the airconditioner is operating and the indoor fan motor is turned ON, if the indoor fan motor has operated at 300 min^{-1} (rpm) or under for more than 30 seconds, the unit enters first in the stop mode and then stops the entire system. TIMER light illuminates simultaneously and the RUN light flashing 6-time at each 8-second.

(d) 3 minutes forced operation

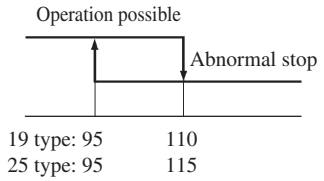
When the compressor begins operating the thermal operation is not effective for 3 minutes, so operation continues as is in the operation mode. (After 3 minutes has passed the thermal operation is effective.)
However, stopping the compressor via a stop signal or protection control has priority.

(e) Abnormality of outdoor unit

When an abnormal stop occurs 3-time with automatic recovery within 20 minutes after the outdoor unit's power supply was turned on.

(f) Compressor overheat protection

If the discharge pipe temperature (sensed by Th3) exceeds the set temperature value, the compressor stops. If the temperature is 95ºC or lower after a 3-minute delay, it starts again, but if this function is reactivated again within 60 minutes, it results in an abnormal stop. (RUN light : ON, TIMER light : 5-time flash)



Discharge pipe temperature (°C)

(g) Serial signal transmission error protection

(i) Purpose: Prevents malfunction resulting from error on the indoor ↔ outdoor signals.

(ii) Detail of operation: If the compressor is operating and a serial signal cannot be received from the indoor control with outdoor control having serial signals continuously for 1 minute and 55 seconds, the compressor is stopped.

After the compressor has been stopped, it will be restarted after the compressor start delay if a serial signal can be received again from the indoor control.

(RUN light: ON, TIMER light: 6-time flash)

(h) Sensor disconnection (room temperature, indoor heat exchanger, outdoor heat exchanger, outdoor temperature, discharge pipe)

(i) Room temperature sensor

If the temperature detected by the room temperature sensor is –45ºC or lower continuously for 15 seconds or longer while operation is stopped, an error indication is displayed. (RUN light: 2-time flash, TIMER light: ON)

(ii) Indoor heat exchanger temperature sensor

If the temperature detected by the indoor heat exchanger temperature sensor is –28ºC or lower continuously for 15 seconds or longer while operation is stopped, an error indication is displayed.

(RUN light : 1-time flash, TIMER light : ON)

(iii) Outdoor heat exchanger temperature sensor

–55ºC or lower is detected for 5 seconds continuously 3-time within 40 minutes after initial detection of this anomalous temperature.

Or –55ºC or lower is detected for within 20 seconds after power ON.

(RUN light : keep flashing, TIMER light : 2-time flash)

(iv) Outdoor air temperature sensor

–55ºC or lower is detected for 5 seconds continuously 3-time within 40 minutes after initial detection of this anomalous temperature.

Or –55ºC or lower is detected for within 20 seconds after power ON.(RUN light : keep flashing, TIME Rlight : 1- time flash)

(v) Discharge pipe temperature sensor

–25ºC or lower is detected for 5 seconds continuously 3-time within 40 minutes after initial detection of this anomalous temperature.

Or –25ºC or lower is detected for within 20 seconds after power ON.(RUN light : keep flashing, TIME Rlight : 4- time flash)

8. MAINTENANCE DATA

(1) Cautions

(a) If you are disassembling and checking an air conditioner, be sure to turn off the power before beginning. When working on indoor units, let the unit sit for about 1 minute after turning off the power before you begin work. When working on an outdoor unit, there may be an electrical charge applied to the main circuit (electrolytic condenser), so begin work only after discharging this electrical charge (to DC 10 V or lower).

(b) When taking out printed circuit boards, be sure to do so without exerting force on the circuit boards or package components.

(c) When disconnecting and connecting connectors, take hold of the connector housing and do not pull on the lead wires.

(2) Items to check before troubleshooting

(a) Have you thoroughly investigated the details of the trouble which the customer is complaining about?

(b) Is the air conditioner running? Is it displaying any self-diagnosis information?

(c) Is a power supply with the correct voltage connected?

(d) Are the control lines connecting the indoor and outdoor units wired correctly and connected securely?

(e) Is the outdoor unit's service valve open?

(3) Troubleshooting procedure (If the air conditioner does not run at all)

If the air conditioner does not run at all, diagnose the trouble using the following troubleshooting procedure. If the air conditioner is running but breaks down, proceed to troubleshooting step (4).

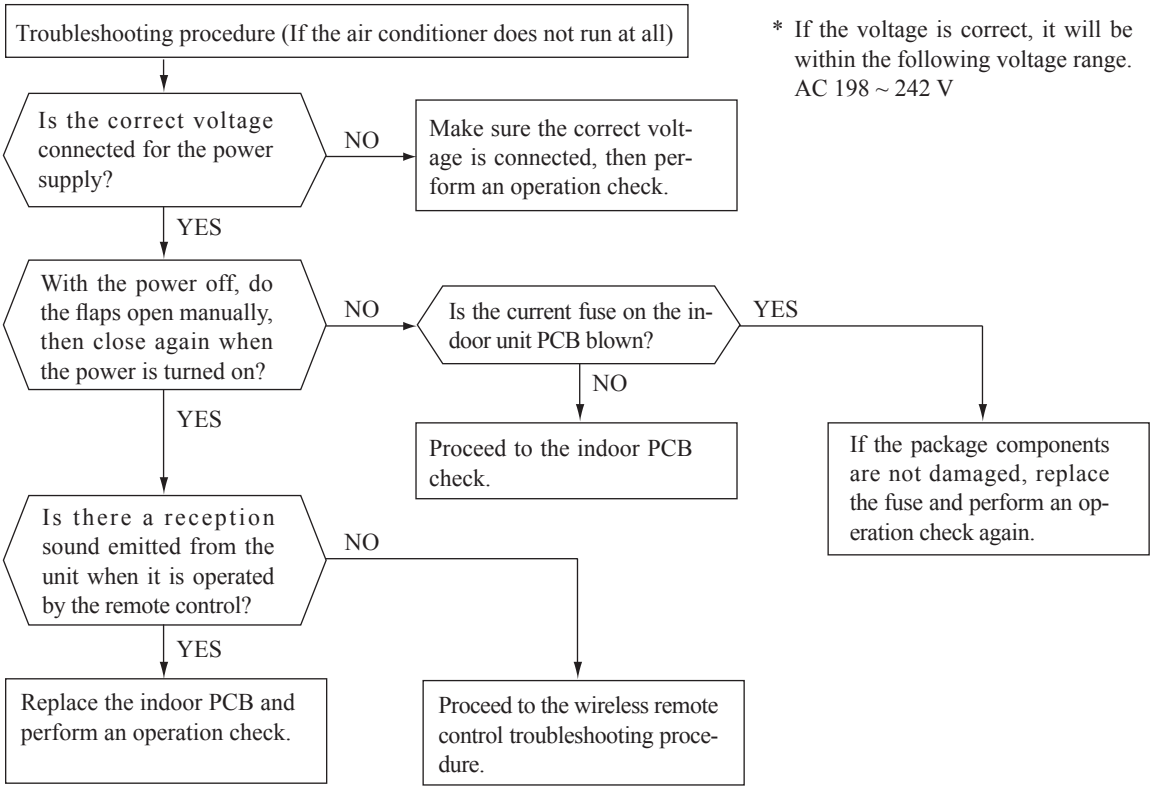
Important When all the following conditions are met, we say that the air conditioner will not run at all.

(a) The RUN light does not light up.

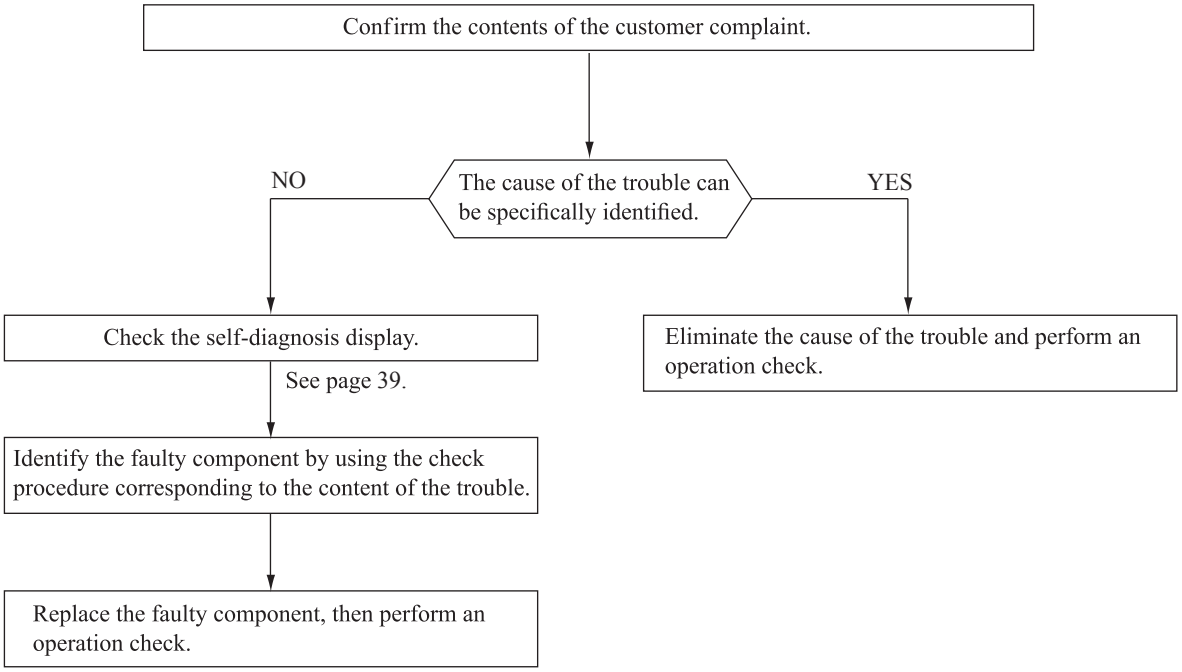
(b) The flaps do not open.

(c) The indoor unit fan motors do not run.

(d) The self-diagnosis display does not function.


Troubleshooting procedure (If the air conditioner does not run at all)
Is the correct voltage connected for the power supply?
NO
Make sure the correct voltage is connected, then perform an operation check.
YES
With the power off, do the flaps open manually, then close again when the power is turned on?
NO
Is the current fuse on the indoor unit PCB blown?
YES
NO
Proceed to the indoor PCB check.
If the package components are not damaged, replace the fuse and perform an operation check again.
YES
Is there a reception sound emitted from the unit when it is operated by the remote control?
NO
YES
Replace the indoor PCB and perform an operation check.
Proceed to the wireless remote control troubleshooting procedure.
* If the voltage is correct, it will be within the following voltage range.
AC 198 ~ 242 V

(4) Troubleshooting procedure (If the air conditioner runs)


Confirm the contents of the customer complaint.
The cause of the trouble can be specifically identified.
NO
YES
Check the self-diagnosis display.
See page 39.
Identify the faulty component by using the check procedure corresponding to the content of the trouble.
Replace the faulty component, then perform an operation check.
Eliminate the cause of the trouble and perform an operation check.

Note (1) Even in cases where only intermittent stop data are generated, the air conditioning system is normal. However, if the same protective operation recurs repeatedly (3 or more times), it will lead to customer complaints. Judge the conditions in comparison with the contents of the complaints.

(5) Self-diagnosis table

When this air conditioner performs an emergency stop, the reason why the emergency stop occurred is displayed by the flashing of display lights. If the air conditioner is operated using the remote control 3 minutes or more after the emergency stop, the trouble display stops and the air conditioner resumes operation. (1)

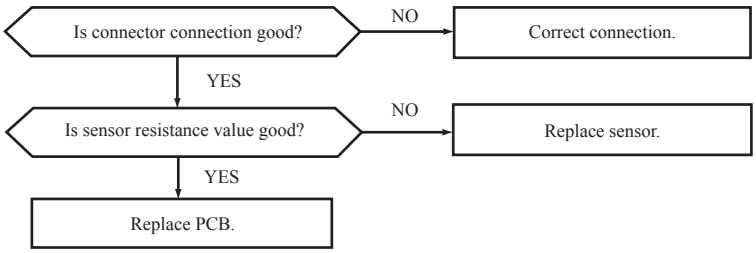
Indoor unit display panel		Description of trouble	Cause	Display (flashing) condition
RUN light	TIMER light			
1-time flash	ON	Heat exchanger sensor 1 error	• Broken heat exchanger sensor 1 wire, poor connector connection • Indoor PCB is faulty	When a heat exchanger sensor 1 wire disconnection is detected while operation is stopped. (If a temperature of –28ºC or lower is detected for 15 seconds, it is judged that the wire is disconnected.) (Not displayed during operation.)
2-time flash	ON	Room temperature sensor error	• Broken room temperature sensor wire, poor connector connection • Indoor PCB is faulty	When a room temperature sensor wire disconnection is detected while operation is stopped. (If a temperature of –45ºC or lower is detected for 15 seconds, it is judged that the wire is disconnected.) (Not displayed during operation.)
6-time flash	ON	Indoor fan motor error	• Defective fan motor, poor connector connection	When conditions for turning the indoor unit's fan motor on exist during air conditioner operation, an indoor unit fan motor speed of 300 min^{-1} (rpm) or lower is measured for 30 seconds or longer. (The air conditioner stops.)
Keeps flashing	1-time flash	Outdoor air temperature sensor error	• Broken outdoor air temp. sensor wire, poor connector connection • Outdoor main PCB is faulty	–55ºC or lower is detected for 5 seconds continuously 3 times within 40 minutes after initial detection of this anomalous temperature. Or –55ºC or lower is detected for within 20 seconds after power ON. (The compressor is stopped.)
Keeps flashing	2-time flash	Outdoor heat exchanger sensor error	• Broken heat exchanger sensor wire, poor connector connection • Outdoor main PCB is faulty	–55ºC or lower is detected for 5 seconds continuously 3 times within 40 minutes after initial detection of this anomalous temperature. Or –55ºC or lower is detected for within 20 seconds after power ON. (The compressor is stopped.)
Keeps flashing	4-time flash	Discharge pipe sensor error	• Broken discharge pipe sensor wire, poor connector connection • Outdoor main PCB is faulty	–25ºC or lower is detected for 5 seconds continuously 3 times within 40 minutes after initial detection of this anomalous temperature. Or –25ºC or lower is detected for within 20 seconds after power ON. (The compressor is stopped.)
ON	2-time flash	Trouble of outdoor unit	• Broken compressor wire • Compressor blockage	When there is an emergency stop caused by trouble in the outdoor unit, or the input current value is found to be lower than the set value. (The air conditioner stops.)
ON	5-time flash	Over heat of compressor	• Gas shortage, defective discharge pipe sensor, service valve is closed	When the value of the discharge pipe sensor exceeds the set value. (The air conditioner stops.)
ON	6-time flash	Error of signal transmission	• Defective power supply, Broken signal wire, defective indoor/outdoor sub PCB	When there is no signal between the indoor PCB and outdoor PCB for 10 seconds or longer (when the power is turned on), or when there is no signal for 7 minute 35 seconds or longer (during operation)(the compressor is stopped).

Notes (1)The air conditioner cannot be restarted using the remote control for 3 minutes after operation stops.

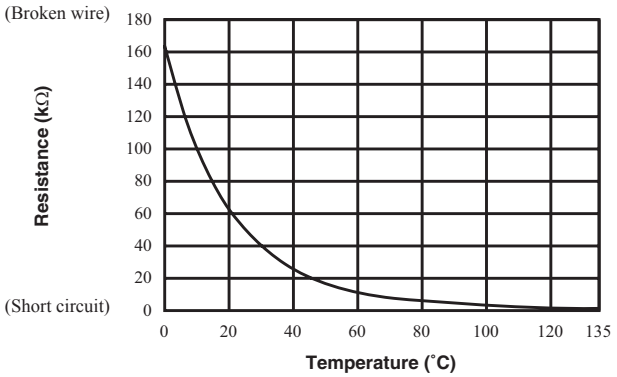
(6) Inspection procedures corresponding to detail of trouble

Sensor error

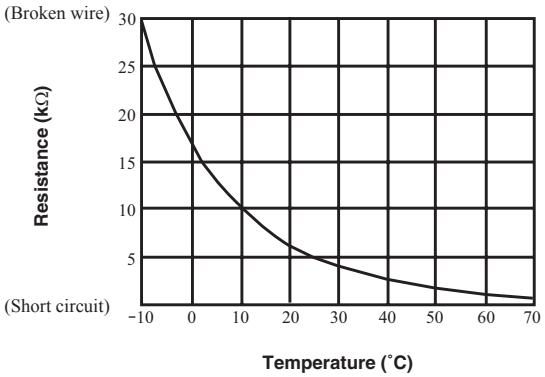
[Broken sensor wire, connector poor connection]



◆ **Discharge pipe sensor temperature characteristics**

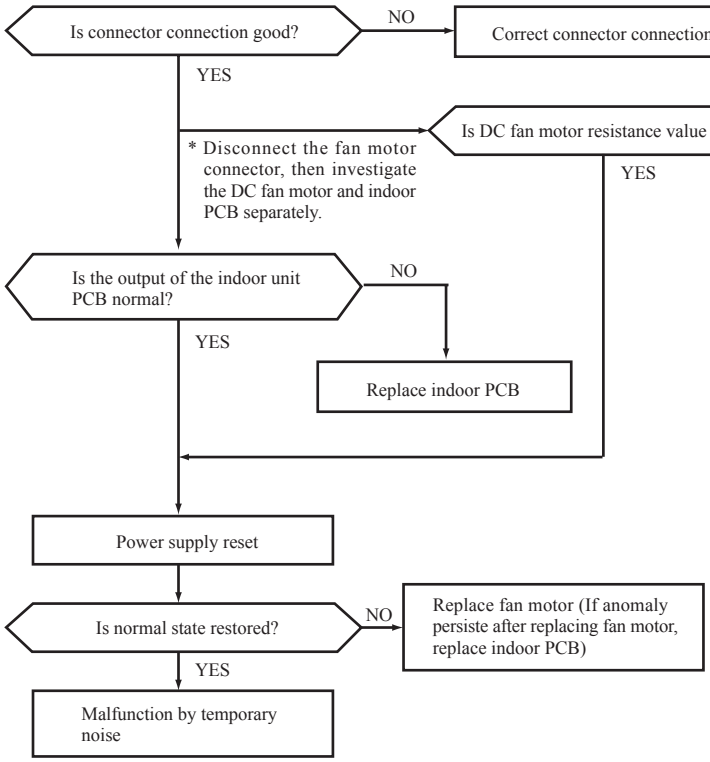


◆ **Sensor temperature characteristics (Room temp., indoor heat exchanger temp., outdoor heat exchanger temp., outdoor air temp.)**



Indoor fan motor error

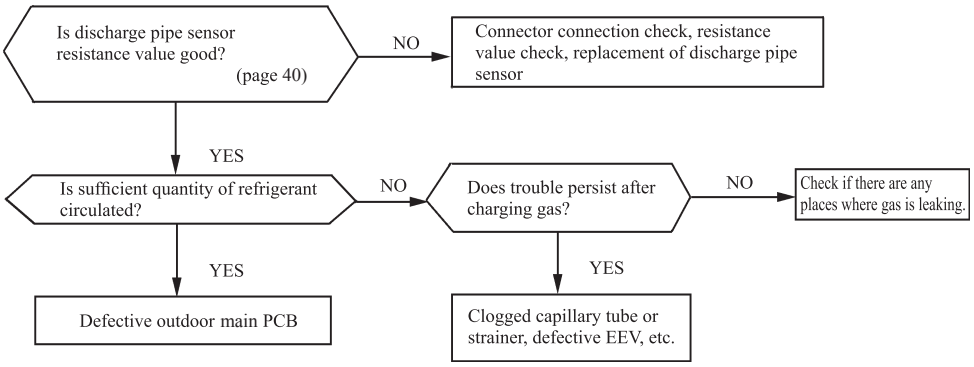
[Defective fan motor, connector poor connection, defective indoor PCB]


Is connector connection good?
NO
Correct connector connection
YES
* Disconnect the fan motor connector, then investigate the DC fan motor and indoor PCB separately.
Is DC fan motor resistance value good?
NO
YES
Replace indoor fan motor
Is the output of the indoor unit PCB normal?
NO
YES
Replace indoor PCB
Power supply reset
Is normal state restored?
NO
Replace fan motor (If anomaly persiste after replacing fan motor, replace indoor PCB)
YES
Malfunction by temporary noise

Notes (1) See page 44 for the DC fan motor and indoor PCB check procedure.
(2) After making sure the DC fan motor and indoor PCB are normal, connect the connectors and confirm that the fan motor is turning.
(If power is turned on while one or the other is broken down, it could cause the other to break down also.)

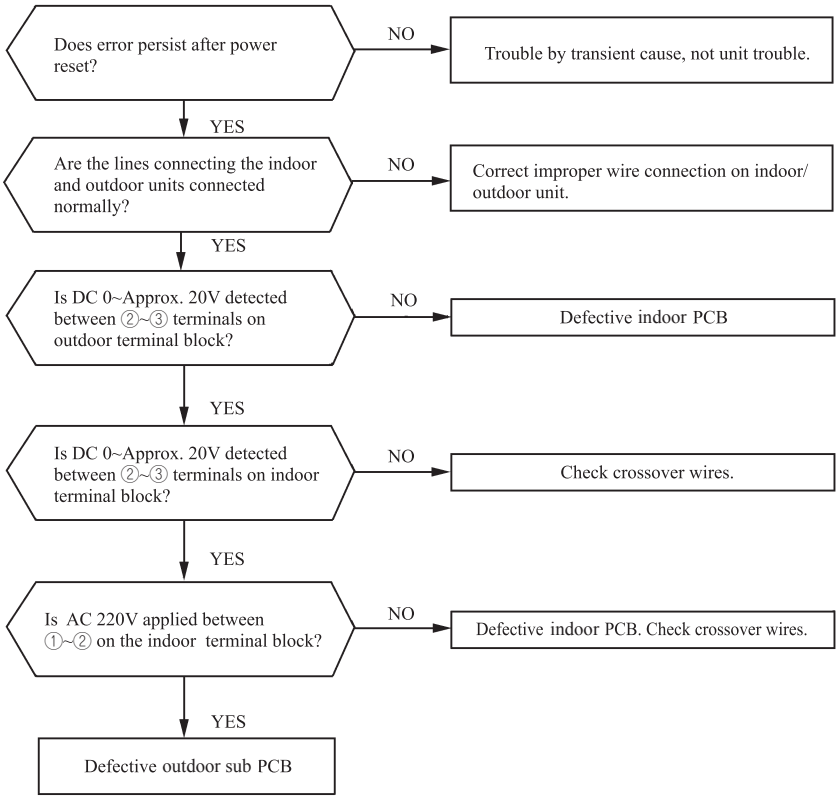
Over heat of compressor

[Gas shortage, defective discharge pipe sensor]


Is discharge pipe sensor resistance value good? (page 40)
NO
Connector connection check, resistance value check, replacement of discharge pipe sensor
YES
Is sufficient quantity of refrigerant circulated?
NO
Does trouble persist after charging gas?
NO
Check if there are any places where gas is leaking.
YES
YES
Defective outdoor main PCB
Clogged capillary tube or strainer, defective EEV, etc.

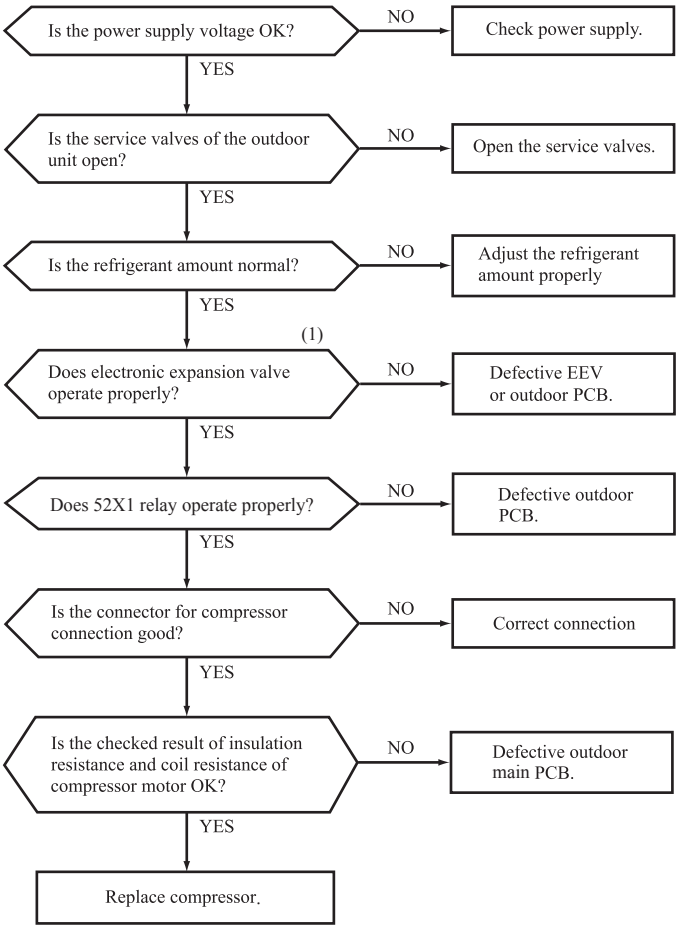
Error of signal transmission

[Wiring error including power cable, defective indoor/outdoor PCB]


Does error persist after power reset?
NO
Trouble by transient cause, not unit trouble.
YES
Are the lines connecting the indoor and outdoor units connected normally?
NO
Correct improper wire connection on indoor/outdoor unit.
YES
Is DC 0~Approx. 20V detected between ②~③ terminals on outdoor terminal block?
NO
Defective indoor PCB
YES
Is DC 0~Approx. 20V detected between ②~③ terminals on indoor terminal block?
NO
Check crossover wires.
YES
Is AC 220V applied between ①~② on the indoor terminal block?
NO
Defective indoor PCB. Check crossover wires.
YES
Defective outdoor sub PCB

Trouble of outdoor unit

[Insufficient refrigerant amount, Faulty power transistor, Broken compressor wire
Service valve close, Defective EEV, Defective outdoor PCB]



Proper power supply voltages are as follows.
(At the power supply outlet)
AC 220V : 198~242V
AC 230V : 207~253V
AC 240V : 216~264V

◆ Judgment of refrigerant quantity
(1) Phenomenon of insufficient refrigerant
(a) Loss of capacity

(7) Phenomenon observed after shortcircuit, wire breakage on sensor

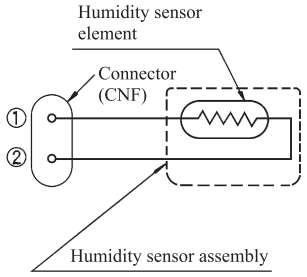
(a) Indoor unit

Sensor	Operation mode	Phenomenon	
		Shortcircuit	Disconnected wire
Room temperature sensor	Cooling	Release of continuous compressor operation command.	Continuous compressor operation command is not released.
Heat exchanger sensor	Cooling	System can be operated normally.	Continiuous compressor operation command is not released. (Anti-frosting)
Humidity sensor	Cooling	Refer to the table below.	Refer to the table below.

■ **Humidity sensor operation**

Failure mode		Control input circuit resding	Air conditioning system operation
Disconnected wire	① Disconnected wire	Humidity reading is 0%	Anti-condensation control is not done.
	② Disconnected wire		
	①② Disconnected wire		
Short Circuit	① and ② are shot circuited	Humidity reading is 100%	Anti-condensation control keep doing.

Remark: Do not perform a continuity check of the humidity sensor with a tester. If DC current is applied, it could damage the sensor.

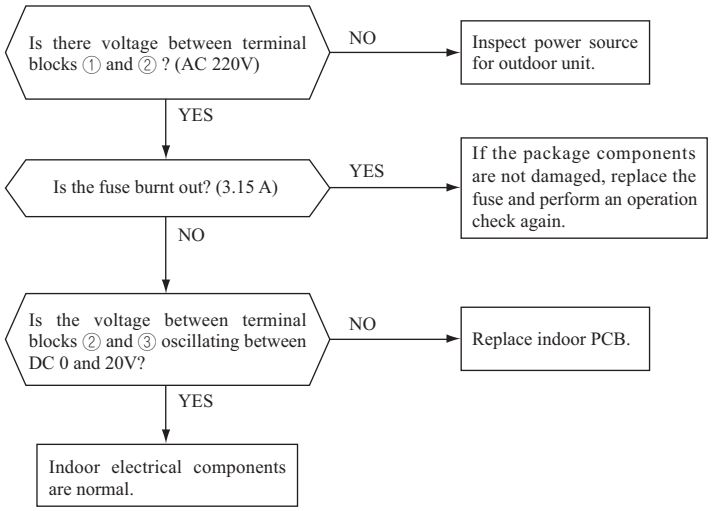


(b) Outdoor unit

Sensor	Operation mode	Phenomenon	
		Shortcircuit	Disconnected wire
Heat exchanger sensor	Cooling	System can be operated normally.	Compressor stop.
Ourdoor air temperature sensor	Cooling	System can be operated normally.	Compressor stop.
Discharge pipe sensor	All modes	Compressor stop.	Compressor stop.

(8) Checking the indoor electrical equipment

(a) Indoor PCB check procedure


Is there voltage between terminal blocks ① and ② ? (AC 220V)
NO
Inspect power source for outdoor unit.
YES
Is the fuse burnt out? (3.15 A)
YES
If the package components are not damaged, replace the fuse and perform an operation check again.
NO
Is the voltage between terminal blocks ② and ③ oscillating between DC 0 and 20V?
NO
Replace indoor PCB.
YES
Indoor electrical components are normal.

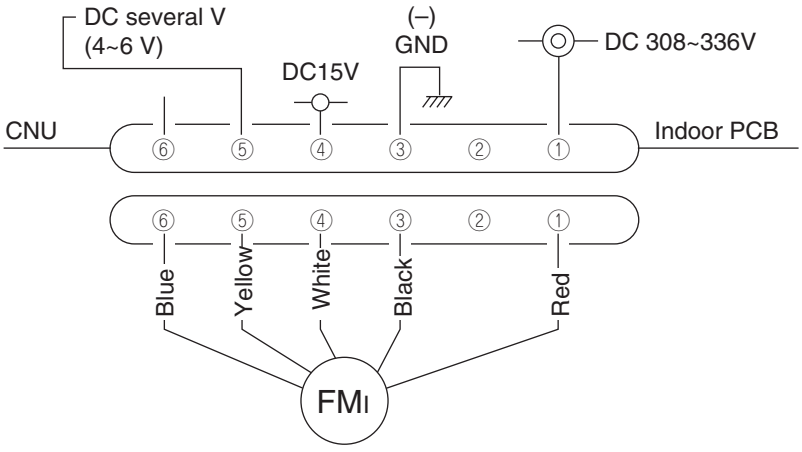
(b) Indoor unit fan motor check procedure

This is a diagnostic procedure for determining if the indoor unit's fan motor or the indoor PCB is broken down.

(i) Indoor PCB output check

1) Turn off the power.
2) Remove the front panel, then disconnect the fan motor lead wire connector.
3) Turn on the power. If the unit operates when the ON/OFF button is pressed, if trouble is detected after the voltages in the following figure are output for approximately 30 seconds, it means that the indoor PCB is normal and the fan motor is broken down.

   If the voltages in the following figure are not output at connector pins No. ①, ④ and ⑤, the indoor PCB has failed and the fan motor is normal.



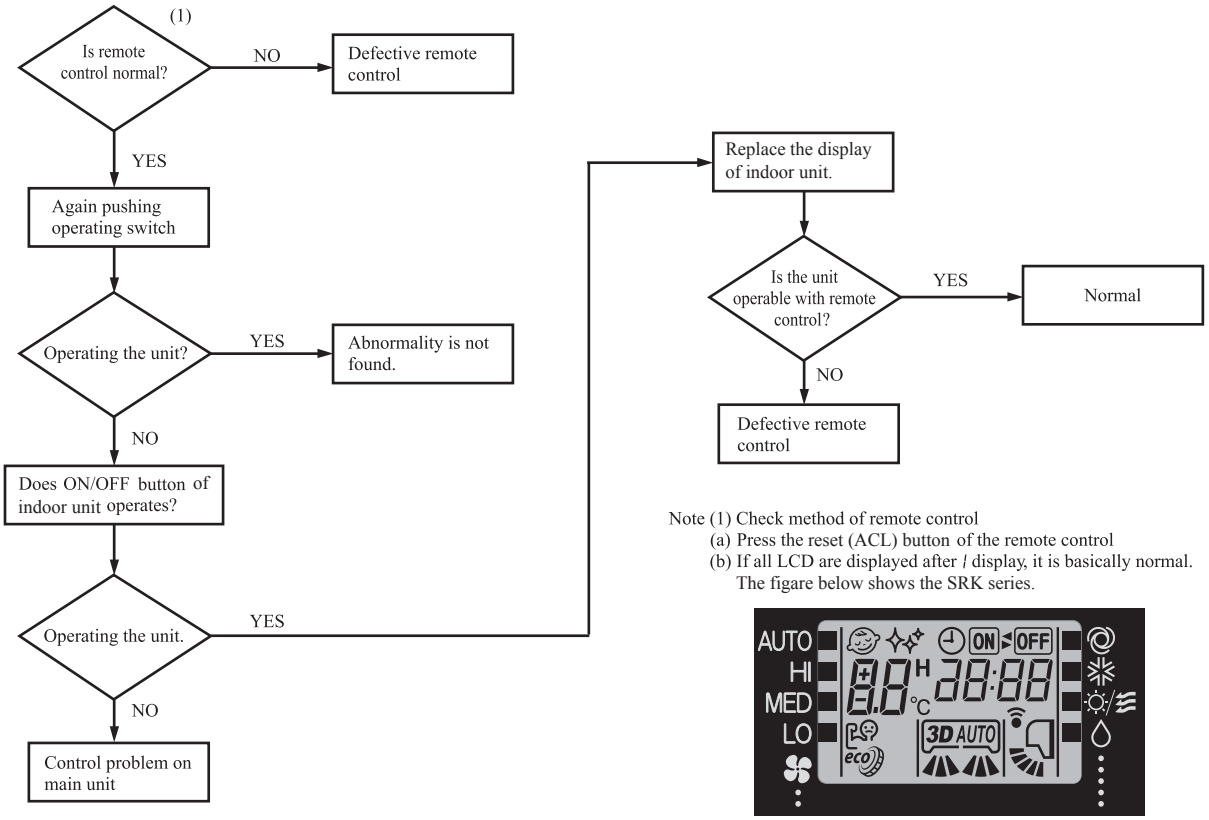
Measuring point	Resistance when normal
① - ③	DC 308~336V
④ - ③	DC 15V
⑤ - ③	DC several V (4~6V)

(ii) Fan motor resistance check

Measuring point	Resistance when normal
① - ③ (Red - Black)	20 MΩ or higher
④ - ③ (White - Black)	20 kΩ or higher

Notes (1) Remove the fan motor and measure it without power connected to it.
(2) If the measured value is below the value when the motor is normal, it means that the fan motor is faulty.

(9) How to make sure of wireless remote control



Note (1) Check method of remote control
(a) Press the reset (ACL) button of the remote control
(b) If all LCD are displayed after / display, it is basically normal.
The figare below shows the SRK series.

PARTS LIST

INDOOR UNIT

SRK19CNS-S3, -S4, -S5, -S7

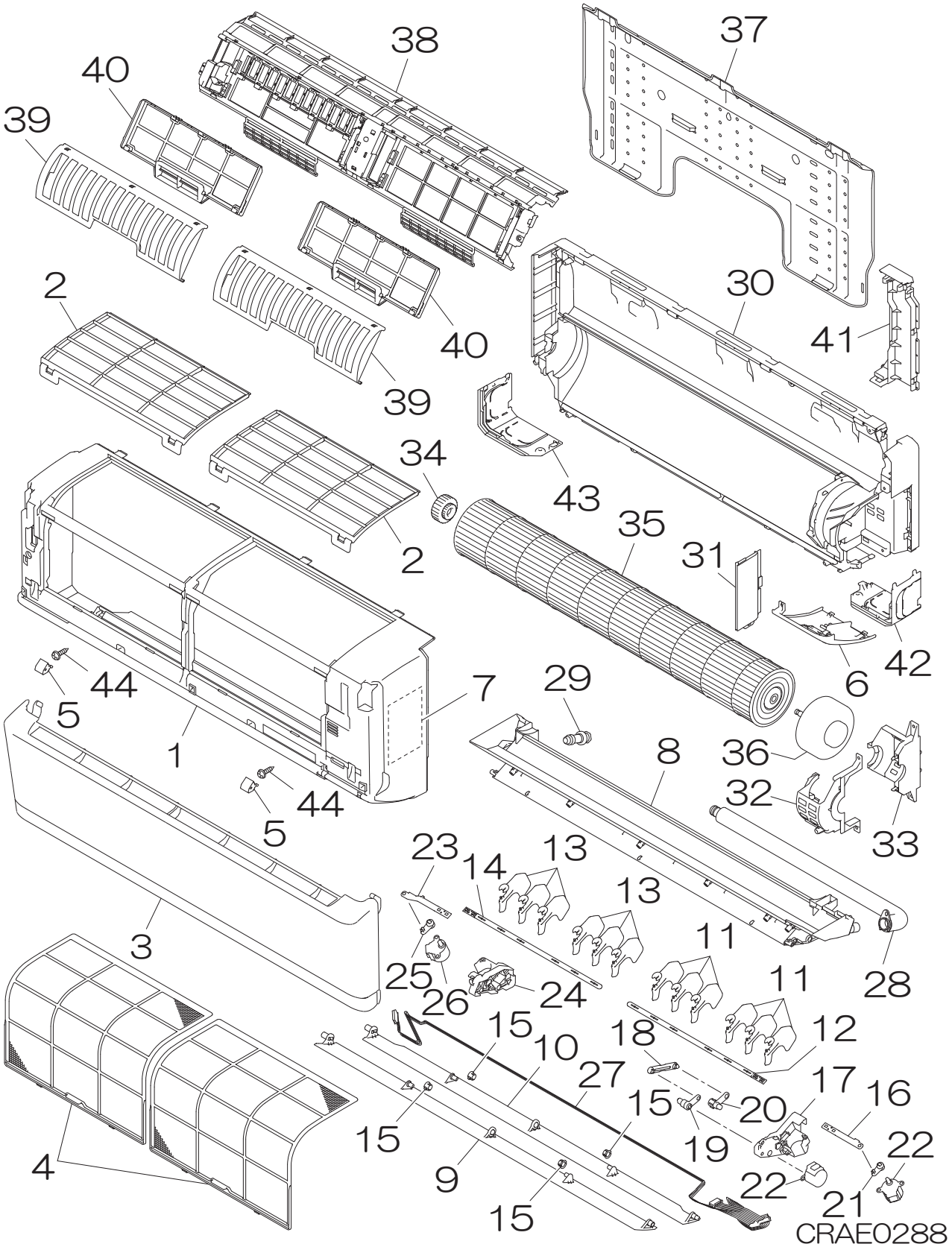
SRK25CNS-S3, -S4, -S5, -S7

OUTDOOR UNIT

SRC19CNS-S3, -S4, -S5, -S7

SRC25CNS-S3, -S4, -S5, -S7

PANEL & FAN ASSY



SRK19CNS-S3, S4, S5, S7

END ITEM NO. : RMA002F062AD, 062AF, 062AG, 062AJ

No.	Part No.	Part Name	RE.Q	Recommendable Purchased Q'ty						Note
				10	30	50	100	500	1000	
1～7	RMA 102A 101C	PANEL ASSY,FRONT	1			1	1	1	2	
1	RKY 122A 002B	PANEL ASSY,FRONT	1			1	1	1	2	
2	RKY 435A 003	GRILLE,AIR IN(TOP)	2			1	1	2	3	
3	RMA 435A 010D	PANEL ASSY,AIR IN	1			1	1	2	3	
4	RKY 437A 001	FILTER,AIR	2			2	2	4	8	W348.5×H339(t2)
5	RKY 129A 012	CAP	2			1	1	1	2	
6	RKY 133A 008C	PLATE ASSY,ORNAMENT	1			1	1	1	2	
7	RMA 011G 007	LABEL WIRING	1							
8～29	RMA 435A 009C	GRILLE ASSY,AIR OUT	1			1	1	2	3	
8	RKY 435A 002	GRILLE,AIR OUT	1			1	1	2	3	
9	RMA 436A 001	FLAP ASSY(U)	1			1	1	2	2	UPPER
10	RMA 436A 003	FLAP ASSY(L)	1			1	1	2	2	LOWER
11・12	RKY 436A 009	LOUVER ASSY	1			1	1	2	2	
11	RKY 436A 011	LOUVER	6			1	1	2	2	
12	RKY 129A 011	PLATE,CONNECTING	1			1	1	1	2	
13・14	RKY 436A 009A	LOUVER ASSY	1			1	1	2	2	
13	RKY 436A 011	LOUVER	6			1	1	2	2	
14	RKY 129A 011	PLATE,CONNECTING	1			1	1	1	2	
15	RKW 935C 200	COLLAR	4							
16～22	RKY 144A 010	LINK ASSY(R)	1			1	1	1	2	
16	RKY 129A 009	JOINT(R)	1			1	1	1	2	
17	RKY 129A 005	BRACKET,MOTOR(R)	1			1	1	1	2	
18	RKY 144A 001	LINK	1			1	1	1	2	
19	RKY 144A 002	CRANK(A)	1			1	1	1	2	
20	RKY 144A 003	CRANK(B)	1			1	1	1	2	
21	RKY 144A 004	CRANK(C)	1			1	1	1	2	
22	SSA 512T 096	MOTOR,STEPPING	2			1	1	1	2	FOR LOUVER(RIGHT),FLAP
23～26	RKY 144A 011A	LINK ASSY(L)	1			1	1	1	2	
23	RKY 129A 010	JOINT(L)	1			1	1	1	2	
24	RKY 129A 006	BRACKET,MOTOR(L)	1			1	1	1	2	
25	RKY 144A 004	CRANK(C)	1			1	1	1	2	
26	SSA 512T 096	MOTOR,STEPPING	1			1	1	1	2	FOR LOUVER(LEFT)
27	RMA 504A 013	HARNESS ASSY	1			1	1	1	2	
28	SSA 423A 102	HOSE,DRAIN	1							
29	SSA 326A 047	PLUG	1							
30	RKY 111A 001A	BASE ASSY	1			1	1	1	2	
31	RKY 129A 002A	PLATE,BASE	1			1	1	1	2	
32	RKY 129A 037	BRACKET ASSY(U)	1			1	1	1	2	
33	RKY 129A 038	BRACKET ASSY(L)	1			1	1	1	2	
34	SSA 923C 114	BEARING,PLANE	1			1	1	1	2	
35	SSA 431G 050A	IMPELLER	1			1	1	2	4	
36	SSA 512T 127A	MOTOR,DC	1			1	1	1	2	FOR IMPELLER
37	RKY 032A 001	PLATE,INSTALLATION	1			1	1	1	2	

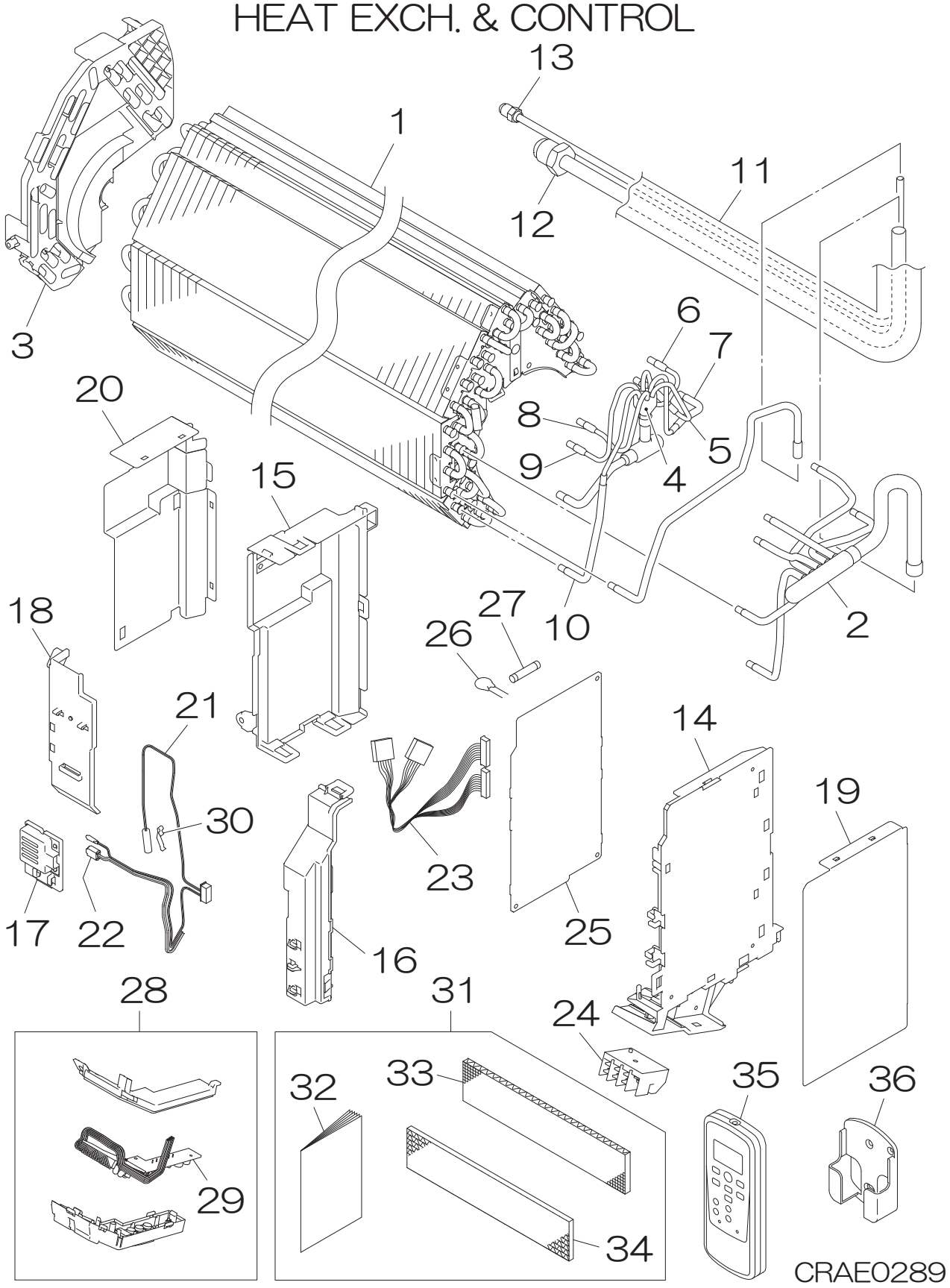
SRK19CNS-S3, S4, S5, S7

END ITEM NO. : RMA002F062AD, 062AF, 062AG, 062AJ

No.	Part No.	Part Name	RE.Q	Recommendable Purchased Q'ty						Note
				10	30	50	100	500	1000	
38～40	RKY 129A 023B	FILTER UNIT ASSY	1			1	1	1	2	
38	RKY 129A 036	HOLDER ASSY(B)	1			1	1	1	2	
39	RKY 129A 025	HOLDER,FILTER(R)	2			1	1	1	2	
40	RKY 129A 028	HOLDER,FILTER	2			1	1	1	2	
41	RKY 129A 034A	COVER ASSY(PIPE)	1			1	1	1	2	
42	RKY 132A 001C	LID(R)	1			1	1	1	2	
43	RKY 132A 002A	LID(L)	1			1	1	1	2	
44	SSA 913A 007	SCREW,TAP	2							4×12

MEMO

HEAT EXCH. & CONTROL

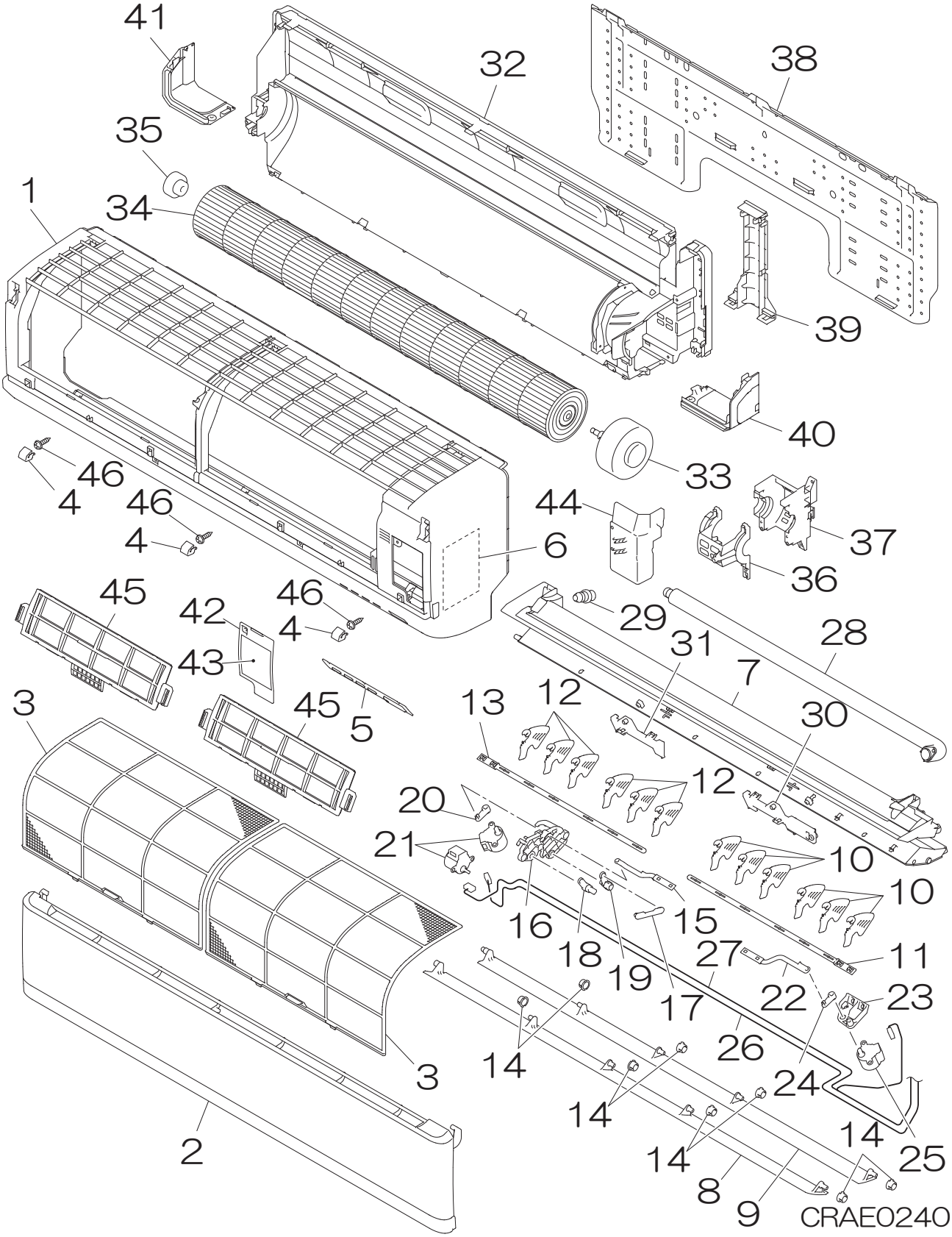


SRK19CNS-S3, S4, S5, S7

END ITEM NO. : RMA002F062AD, 062AF, 062AG, 062AJ

No.	Part No.	Part Name	RE.Q	Recommendable Purchased Q'ty						Note
				10	30	50	100	500	1000	
1～10	RMA 301A 012	HEAT EXCH ASSY(AIR)	1			1	1	1	2	
2	RMA 315D 008	HEADER ASSY	1							
3	RKY 129A 035	BRACKET ASSY(L)	1			1	1	1	2	
4～10	RKY 315A 002	DISTRIBUTOR ASSY	1							
11～13	RMA 321A 138	PIPE ASSY	1							
12	SSA 323F 012F	UNION,SOLDER	1							FOR GAS
13	SSA 323F 088A	UNION(SLD)	1							FOR LIQ.
14	RKY 142A 001	BOX,CONTROL(R)	1							
15	RKY 142A 002	BOX,CONTROL(L)	1							
16	RKY 132A 003	LID,CONTROL	1							
17	RKY 129A 015	HOLDER,SENSOR	1							
18	RKY 129A 014	COVER,BEND	1							
19	RKY 132A 004	COVER,CONTROL(R)	1							
20	RKY 132A 005	COVER,CONTROL(L)	1							
21	SSA 551A 223A	SENSOR ASSY	1			1	1	2	4	INCL.SENSOR (ROOM TEMP.& HEAT EXCH.)
22	SSA 551B 017A	SENSOR(HUMIDITY)	1			1	1	2	4	
23	RMA 504A 012	HARNESS ASSY	1							
24	SSA 561B 702B	BLOCK,TERMINAL	1			1	1	2	2	T1
25～27	RKY 505A 001JK	PWB ASSY	1			2	2	4	8	
26	SSA 555B 058AD	VARISTOR	1			1	1	1	2	Z
27	SSA 564A 132	FUSE(CURRENT)	1			1	1	1	2	F 3.15A
28	RKY 503A 001D	DISPLAY ASSY	1			1	1	2	4	
29	RKY 505A 003D	PWB ASSY	1			2	2	4	8	
30	RKJ 941F 001A	SPRING,LEAF	1							
31	RMA 008A 012C	PARTS,STANDARD	1							
32	RMA 012A 077A	MANUAL,INSTRUCTION	1							
33	RKT 437A 011B	FILTER,CLEAN	1							
34	RKT 437A 005C	FILTER,LIGHT CLEAN	1							
35	RKX 502A 001	CONTROL ASSY,REMOTE	1			2	3	5	10	
36	RKN 032A 002C	HOLDER(REMO-CON)	1			1	1	1	2	
(37)	RMA 011F 016AW	LABEL,MODEL NAME	1							FOR S3
(37)	RMA 011F 016AY	LABEL,MODEL NAME	1							FOR S4
(37)	RMA 011F 016AZ	LABEL,MODEL NAME	1							FOR S5
(37)	RMA 011F 016BR	LABEL,MODEL NAME	1							FOR S7

PANEL & FAN ASSY



SRK25CNS-S3, S4, S5, S7

END ITEM NO. : RMA002F063AD, 063AF, 063AG, 063AJ

No.	Part No.	Part Name	RE.Q	Recommendable Purchased Q'ty						Note
				10	30	50	100	500	1000	
1～6	RKW 102A 400H	PANEL ASSY,FRONT	1			1	1	1	2	
1	RKW 122A 400C	PANEL,FRONT	1			1	1	1	2	
2	RKW 435A 401F	PANEL ASSY,AIR IN	1			1	1	2	3	
3	RKW 437A 400	FILTER,AIR	2			1	1	2	3	W458.5×H345.3(t2)
4	RKW 129A 214A	CAP	3			1	1	1	2	
5	RKW 133A 401	PLATE,ORNAMENT	1			1	1	1	2	
6	RKW 011G 400C	LABEL,WIRING	1							
7～31	RKW 435A 202G	GRILLE ASSY,AIR OUT	1			1	1	2	3	
7	RKW 435A 203B	GRILLE,AIR OUTLET	1			1	1	2	3	
8	RKW 436A 200A	FLAP(A)	1			1	1	2	2	UPPER
9	RKW 436A 201A	FLAP(B)	1			1	1	2	2	LOWER
10・11	RKW 436A 202B	LOUVER ASSY	1			1	1	2	2	
10	RKW 436A 203A	LOUVER	6			1	1	2	2	
11	RKW 129A 209A	PLATE,CONNECTING	1			1	1	1	2	
12・13	RKW 436A 202C	LOUVER ASSY	1			1	1	2	2	
12	RKW 436A 203A	LOUVER	6			1	1	2	2	
13	RKW 129A 209A	PLATE,CONNECTING	1			1	1	1	2	
14	RKW 935C 200	COLLAR	8							
15～21	RKW 144A 200A	LINK ASSY	1			1	1	1	2	
15	RKW 129A 208A	JOINT(L)	1			1	1	1	2	
16	RKW 129A 210	BRACKET,MOTOR(A)	1			1	1	1	2	
17	RKW 144A 201	LINK	1			1	1	1	2	
18	RKW 144A 202	CRANK(A)	1			1	1	1	2	
19	RKW 144A 203	CRANK(B)	1			1	1	1	2	
20	RKW 144A 204	CRANK(C)	1			1	1	1	2	
21	SSA 512T 049	MOTOR,STEPPING	2			1	1	1	2	FOR LOUVER(LEFT),FLAP
22～25	RKW 144A 205A	CRANK ASSY	1			1	1	1	2	
22	RKW 129A 207A	JOINT(R)	1			1	1	1	2	
23	RKW 129A 211	BRACKET,MOTOR(B)	1			1	1	1	2	
24	RKW 144A 204	CRANK(C)	1			1	1	1	2	
25	SSA 512T 049	MOTOR,STEPPING	1			1	1	1	2	FOR LOUVER(RIGHT)
26	RKW 504A 401	HARNESS ASSY	1			1	1	1	2	FOR FLAP MOTOR
27	RKW 504A 402	HARNESS ASSY	1			1	1	1	2	FOR LOUVER MOTOR
28	SSA 423A 102A	HOSE,DRAIN	1							
29	SSA 326A 043	PLUG	1							
30	RKW 116A 400	BRACKET,PANEL(R)	1			1	1	1	2	
31	RKW 116A 401	BRACKET,PANEL(L)	1			1	1	1	2	
32	RKW 111A 200C	BASE ASSY	1			1	1	1	2	
33	SSA 512T 099	MOTOR,DC	1			1	1	1	2	FOR IMPELLER
34	SSA 431G 043B	IMPELLER	1			1	1	2	4	
35	SSA 923C 114	BEARING,PLANE	1			1	1	1	2	
36	RKW 129A 201	BRACKET,MOTOR(U)	1			1	1	1	2	
37	RKW 129A 202	BRACKET,MOTOR(L)	1			1	1	1	2	

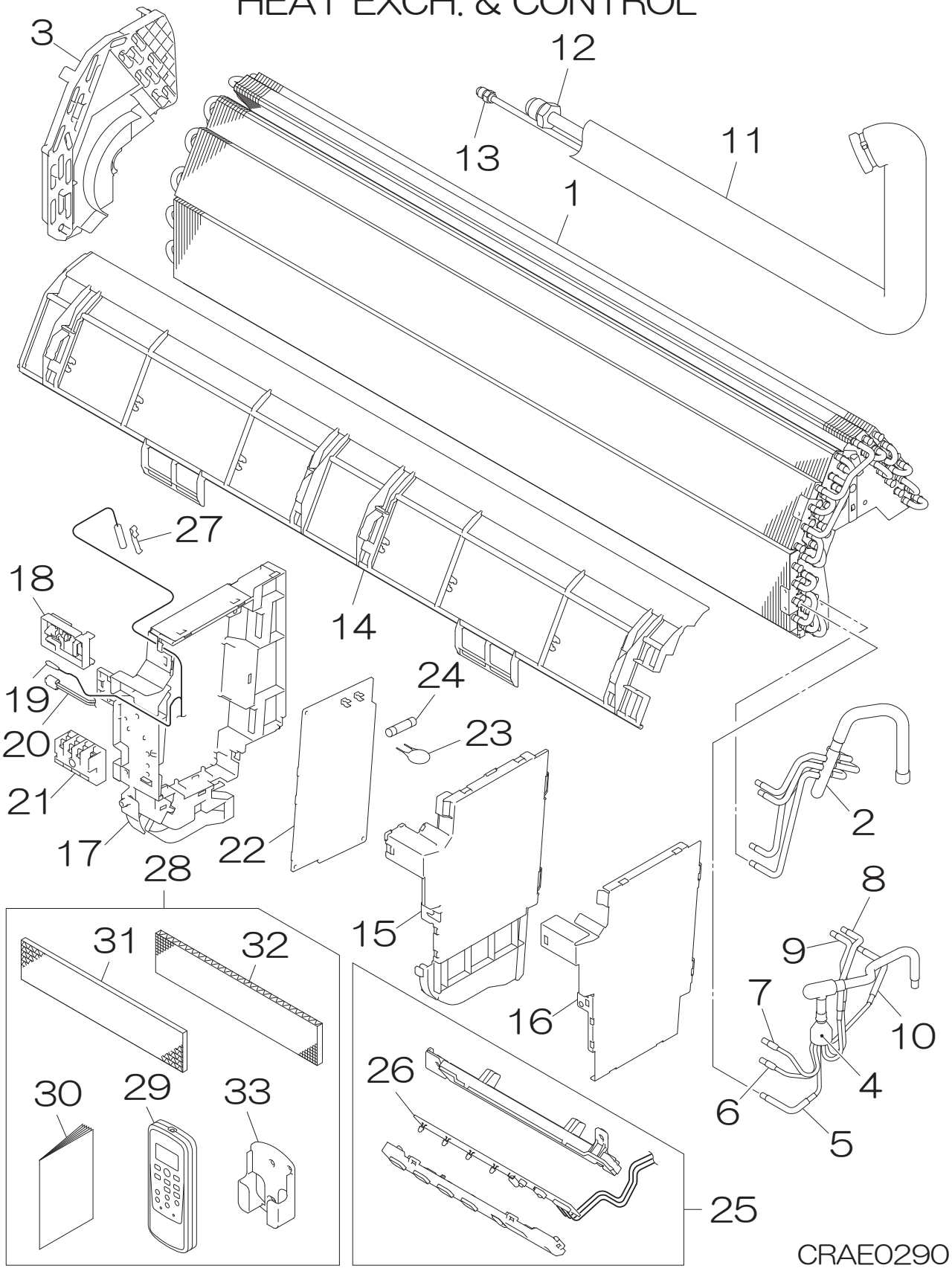
SRK25CNS-S3, S4, S5, S7

END ITEM NO. : RMA002F063AD, 063AF, 063AG, 063AJ

No.	Part No.	Part Name	RE.Q	Recommendable Purchased Q'ty						Note
				10	30	50	100	500	1000	
38	RKW 032A 200A	PLATE,INSTALLATION	1			1	1	1	2	
39	PHA 129A 302A	COVER ASSY(PIPE)	1			1	1	1	2	
40	RKW 132A 400	LID(R)	1			1	1	1	2	
41	RKW 132A 401	LID(L)	1			1	1	1	2	
42・43	RKW 132A 403	LID ASSY(TERMINAL)	1			1	1	1	2	
43	RSA 011H 027	LABEL,NOTICE	1			1	1	1	2	
44	RKW 129A 405	COVER,PIPE	1			1	1	1	2	
45	RKW 129A 213	HOLDER,FILTER	2			1	1	1	2	
46	SSA 913A 007A	SCREW,TAP	3							4×14

MEMO

HEAT EXCH. & CONTROL

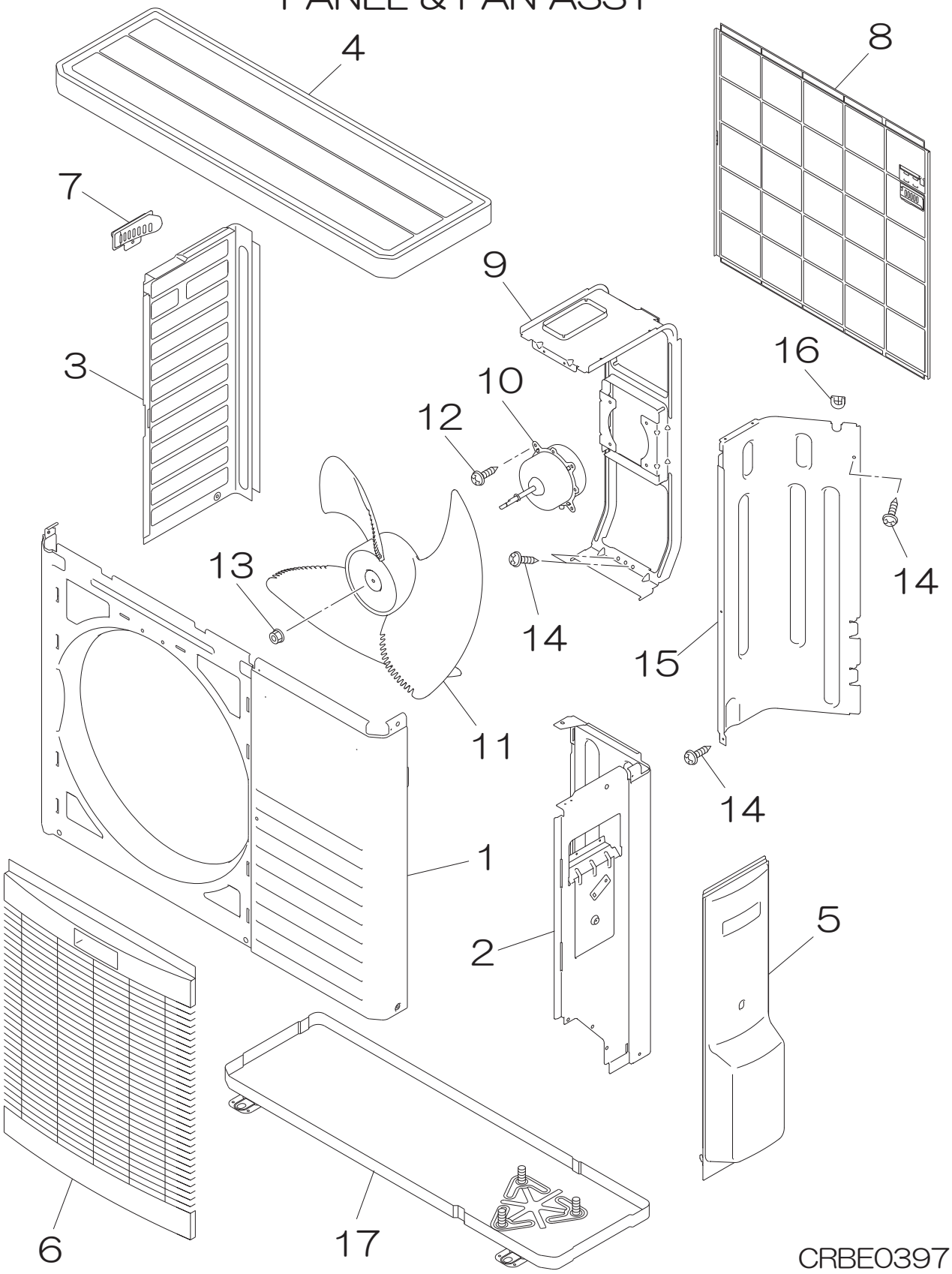


SRK25CNS-S3, S4, S5, S7

END ITEM NO. : RMA002F063AD, 063AF, 063AG, 063AJ

No.	Part No.	Part Name	RE.Q	Recommendable Purchased Q'ty						Note
				10	30	50	100	500	1000	
1～10	RMA 301A 008	HEAT EXCH ASSY(AIR)	1			1	1	1	2	
2	RMA 315D 003	HEADER ASSY	1							
3	RKW 129A 410	BRACKET ASSY(L)	1			1	1	1	2	
4～10	RMA 315A 006	DISTRIBUTOR ASSY	1							
4	RSA 315A 005	DISTRIBUTOR	1							
5	RMA 321A 015	PIPE ASSY	1							Φ2.8×Φ4.0 L100
6	RMA 315B 004	CAPILLARY	1							Φ2.8×Φ4.0 L100
7	RMA 315B 005	CAPILLARY	1							Φ2.8×Φ4.0 L100
8	RMA 321A 016	PIPE ASSY	1							Φ2.8×Φ4.0 L100
9	RMA 321A 018	PIPE ASSY	1							Φ2.8×Φ4.0 L100
10	RMA 321A 020	PIPE ASSY	1							Φ2.8×Φ4.0 L100
11～13	RMA 321A 030	PIPE ASSY	1							
12	SSA 323F 012F	UNION,SOLDER	1							FOR GAS
13	SSA 323F 088A	UNION(SLD)	1							FOR LIQ.
14	RKW 129A 411	HOLDER ASSY,FILTER	1							
15・16	RKW 142A 400	BOX ASSY,CONTROL(R)	1							
15	RKW 142A 402	BOX,CONTROL(R)	1							
16	RKW 132A 404	COVER,CONTROL(R)	1							
17	RKW 142A 401	BOX ASSY,CONTROL(L)	1							
18	RKW 129A 407	HOLDER,SENSOR	1							
19	SSA 551A 223H	SENSOR ASSY	1			1	1	2	4	INCL.SENSOR (ROOM TEMP.& HEAT EXCH.)
20	SSA 551B 017C	SENSOR(HUMIDITY)	1			1	1	2	4	
21	SSA 561B 702B	BLOCK,TERMINAL	1			1	1	2	2	T1
22～24	RKY 505A 001JL	PWB ASSY	1			2	2	4	8	
23	SSA 555B 058AD	VARISTOR	1			1	1	1	2	Z
24	SSA 564A 132	FUSE(CURRENT)	1			1	1	1	2	F 3.15A
25	RKW 503A 400A	DISPLAY ASSY	1			1	1	2	4	
26	RKW 505A 400A	PWB ASSY(DISPLAY)	1			2	2	4	8	
27	RKJ 941F 001A	SPRING,LEAF	1							
28	RMA 008A 016A	PARTS,STANDARD	1							
29	RKX 502A 001	CONTROL ASSY,REMOTE	1			2	3	5	10	
30	RMA 012A 077A	MANUAL,INSTRUCTION	1							
31・32	RKW 437A 201A	FILTER ASSY,CLEAN	1							
31	RKT 437A 005D	FILTER,LIGHT CLEAN	1							
32	RKT 437A 011D	FILTER,CLEAN	1							
33	RKN 032A 002C	HOLDER(REMO-CON)	1			1	1	1	2	
(34)	RMA 011F 016BC	LABEL,MODEL NAME	1							FOR S3
(34)	RMA 011F 016BD	LABEL,MODEL NAME	1							FOR S4
(34)	RMA 011F 016BF	LABEL,MODEL NAME	1							FOR S5
(34)	RMA 011F 016BS	LABEL,MODEL NAME	1							FOR S7

PANEL & FAN ASSY

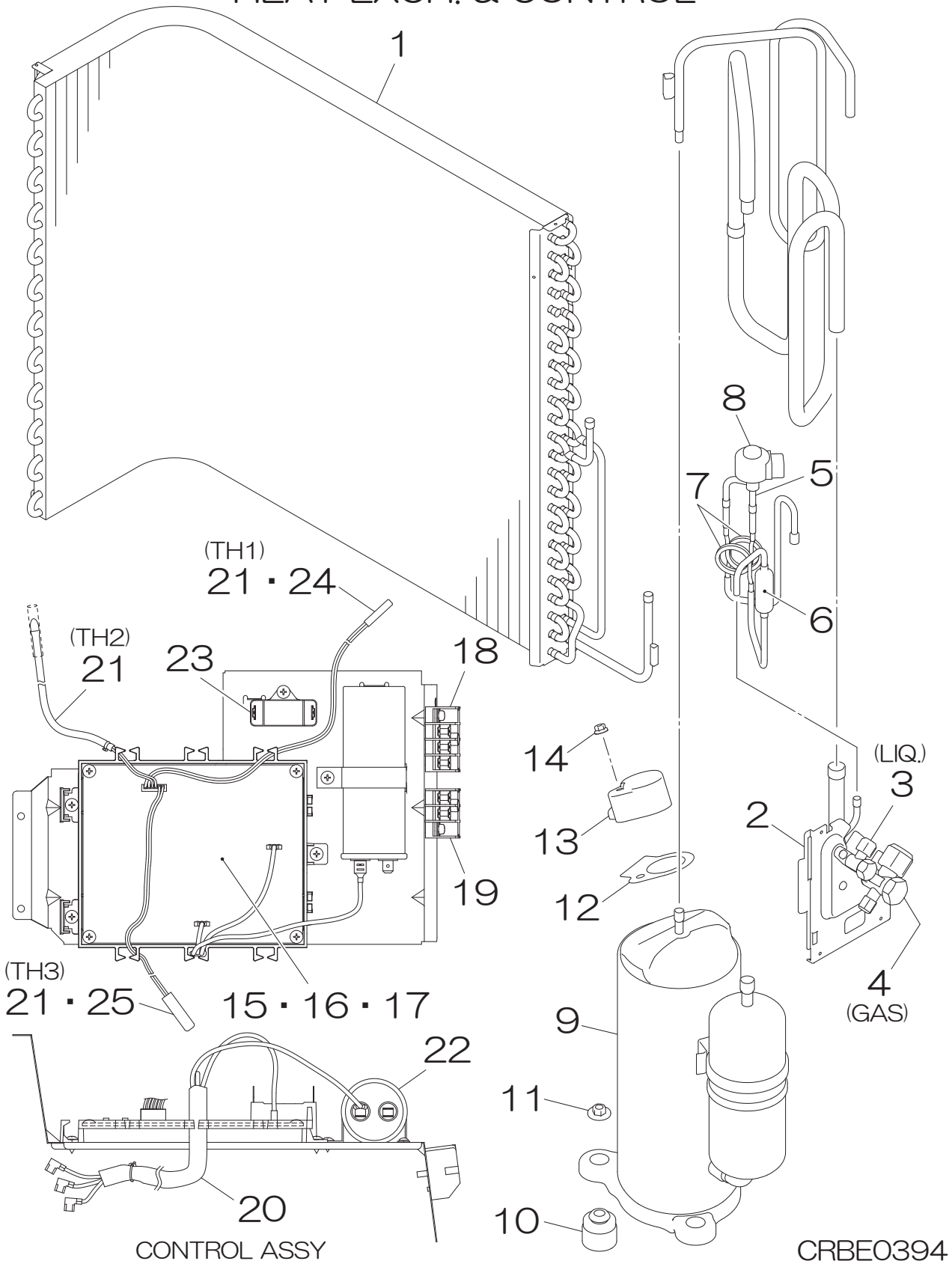


SRC19CNS-S3, S4, S5, S7

END ITEM NO. : RMC003F062AD, 062AF, 062AG, 062AJ

No.	Part NO.	Part Name	RE.Q	Recommendable Purchased Q'ty						Note
				10	30	50	100	500	1000	
1	RWC 122A 004A	PANEL ASSY,FRONT	1			1	1	1	2	
2	RWC 123A 005F	PANEL ASSY,SIDE(R)	1			1	1	1	2	
3	RWC 123A 008	PANEL,SIDE(L)	1			1	1	1	2	
4	RWC 124A 004	PANEL ASSY,TOP	1			1	1	1	2	
5	RWC 132A 007	PANEL ASSY,SERVICE	1			1	1	1	2	
6	RWC 435A 002	GRILLE,AIR OUTLET	1			1	1	2	3	
7	SSA 944B 036B	HANDLE	1							
8	RWC 131A 004	GUARD,FIN	1							
9	RWC 116A 04103	BRACKET,MOTOR	1							
10	SSA 511B 818A	MOTOR,AC	1			1	1	1	2	
11	SSA 431B 233	PROPELLER	1			1	1	2	4	
12	SSA 913A 034F	SCREW,TAP	4							4×8
13	SSA 914B 007AD	NUT,TH	1							
14	W011D04X008	TAP-SCREW,CRS-TRS 2	5							4×8
15	RWC 141A 002	PLATE,BAFFLE	1							
16	SSA 947B 019	GROMMET	1			1	1	2	4	
17	RWC 111A 005R	BASE ASSY	1			1	1	1	2	

HEAT EXCH. & CONTROL

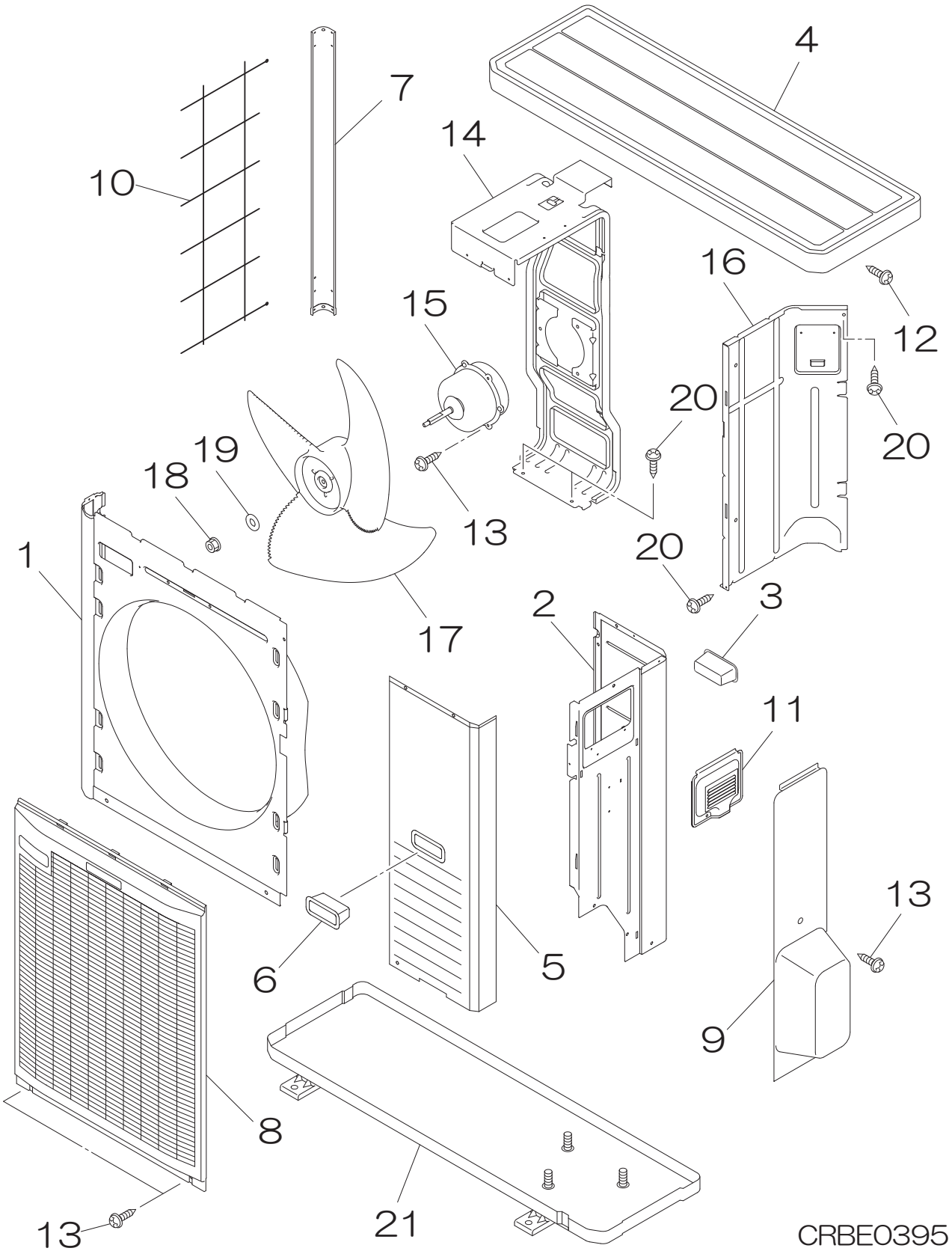


SRC19CNS-S3, S4, S5, S7

END ITEM NO. : RMC003F062AD, 062AF, 062AG, 062AJ

No.	Part NO.	Part Name	RE.Q	Recommendable Purchased Q'ty						Note
				10	30	50	100	500	1000	
1	RMC 301A 009A	HEAT EXCH ASSY(AIR)	1			1	1	1	2	
2	RCK 116A 002	BRACKET(VALVE)	1							
3	RCP 381A 001A	VALVE,SERVICE(1/4")	1			1	1	1	2	LIQ.
4	RWC 381A 017	VALVE,SERVICE(5/8")	1			1	1	1	2	GAS
5～7	RWC 304A 137	PIPING ASSY(EXPAN)	1			1	1	1	2	
5	SSA 387F 052	VALVE,BODY(EXP)	1			1	1	1	2	EEV
6	SSA 357A 005A	STRAINER	1							
7	RWC 315B 098	CAPILLARY,SUB	2							Φ2.6×Φ4.0 L300
8	SSA 382F 210L	COIL,SOLENOID	1			1	1	1	2	FOR EEV
9	RMC 201A 061	COMPRESSOR ASSY	1			1	2	3	8	
10	RMC 941C 051	CUSHION,RUBBER	3							
11	SSA 914C 013A	NUT,FLANGE	3							
12	RMC 932C 004	GASKET,COVER	1							
13	RMC 947K 004	COVER,TERMINAL	1			1	1	2	4	
14	RMC 914C 002	NUT,FLANGE	1							
15～17	RCR 505A 040F	PWB ASSY	1			2	2	4	8	
16	SSA 555B 058AD	VARISTOR	1							Z
17	SSA 564A 132	FUSE(CURRENT)	1			1	1	2	4	F 3.15A
18	SSA 561B 702B	BLOCK,TERMINAL	1			1	1	2	2	T1
19	SSA 561B 665	BLOCK,TERMINAL	1			1	1	2	2	T2
20	RCP 504A 500A	HARNESS ASSY	1							FOR COMP.
21	SSA 551A 185K	SENSOR ASSY	1			1	1	2	4	TH1,TH2,TH3
22	SSA 552A 178F	CAPACITOR,RUNNING	1			1	1	2	4	440VAC 45μF
23	SSA 552A 836A	CAPACITOR,RUNNING	1			1	1	2	4	500VAC 2μF
24	RKJ 941F 001A	SPRING,LEAF	1							FOR TH1
25	RCJ 941F 001	SPRING,LEAF	1							FOR TH2
(26)	RMC 011F 021CC	LABEL,MODEL NAME	1							FOR S3
(26)	RMC 011F 021CD	LABEL,MODEL NAME	1							FOR S4
(26)	RMC 011F 021CF	LABEL,MODEL NAME	1							FOR S5
(26)	RMC 011F 021DF	LABEL,MODEL NAME	1							FOR S7

PANEL & FAN ASSY

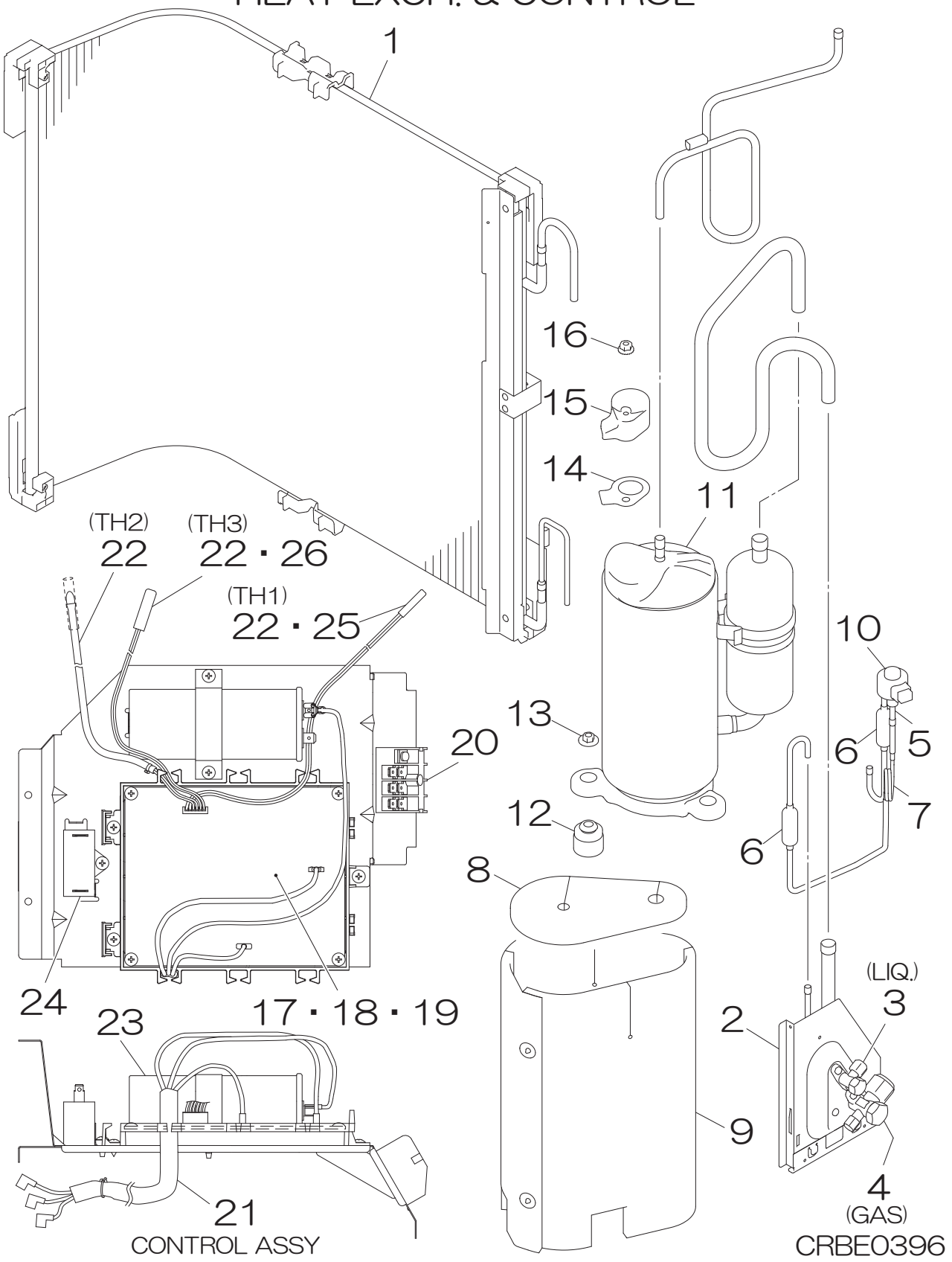


SRC25CNS-S3, S4, S5, S7

END ITEM NO. : RMC003F063AD, 063AF, 063AG, 063AJ

No.	Part NO.	Part Name	RE.Q	Recommendable Purchased Q'ty						Note
				10	30	50	100	500	1000	
1	RCR 122A 001	PANEL ASSY,FRONT	1			1	1	1	2	
2・3	RCR 125A 002G	PANEL ASSY,REAR	1			1	1	1	2	
3	SSA 944B 031A	HANDLE	1							
4	RCR 124A 002M	PANEL ASSY,TOP	1			1	1	1	2	
5・6	RCR 122A 004A	PANEL ASSY,SERVICE	1			1	1	1	2	
5	RCR 122A 006B	PANEL,SERVICE	1			1	1	1	2	
6	SSA 944B 031A	HANDLE	1							
7	RCR 115A 002A	SUPPORT,CORNER	1							
8	RCR 435A 001	GRILLE,AIR OUTLET	1			1	1	2	3	
9	RCR 132A 004B	COVER ASSY,SERVICE	1							
10	RCR 131A 002	GUARD,FIN(B)	1							
11	RCR 132A 002	COVER,TERMINAL	1							
12	SSA 913A 034F	SCREW,TAP	20							4×8
13	SSA 913A 034G	SCREW,TAP	6							4×12
14	RCR 116A 001A	BRACKET,MOTOR	1							
15	SSA 511B 819	MOTOR,AC	1			1	1	1	2	
16	RCR 141A 00102	PLATE,BAFFLE	1							
17	SSA 431B 247A	FAN,PROPELLER	1			1	1	2	4	
18	SSA 914B 007AD	NUT,TH	1							
19	W200H10	WASHER	1							
20	W011D04X008	TAP-SCREW,CRS-TRS 2	4							4×8
21	RCR 111A 001D	BASE ASSY	1			1	1	1	2	

HEAT EXCH. & CONTROL



SRC25CNS-S3, S4, S5, S7

END ITEM NO. : RMC003F063AD, 063AF, 063AG, 063AJ

No.	Part NO.	Part Name	RE.Q	Recommendable Purchased Q'ty						Note
				10	30	50	100	500	1000	
1	RMC 301A 041	HEAT EXCH ASSY(AIR)	1			1	1	1	2	
2	RCR 116A 003	BRACKET(VALVE)	1							
3	RCR 381A 003B	VALVE,SERVICE(1/4")	1			1	1	1	2	LIQ.
4	RCR 381A 004	VALVE,SERVICE(5/8")	1			1	1	1	2	GAS
5～7	RMC 304A 025	PIPING ASSY(EXPAN)	1			1	1	1	2	
5	SSA 387F 052	VALVE,BODY(EXP)	1			1	1	1	2	EEV
6	SSA 357A 005A	STRAINER	2							
7	RMC 315B 016	CAPILLARY	1							Φ2.6×Φ4.0 L300
8	RMC 154D 013	INSULATION,COMP	1							
9	RMC 154D 014	INSULATION	1							
10	SSA 382F 210L	COIL,SOLENOID	1			1	1	1	2	FOR EEV
11	RMC 201A 060	COMPRESSOR ASSY	1			1	2	3	8	
12	RMC 941C 051	CUSHION,RUBBER	3							
13	SSA 914C 013A	NUT,FLANGE	3							
14	RMC 932C 004	GASKET,COVER	1							
15	RMC 947K 004	COVER,TERMINAL	1			1	1	2	4	
16	RMC 914C 002	NUT,FLANGE	1							
17～19	RCR 505A 040G	PWB ASSY	1			2	2	4	8	
18	SSA 555B 058AD	VARISTOR	1							Z
19	SSA 564A 132	FUSE(CURRENT)	1			1	1	2	4	F 3.15A
20	SSA 561B 723A	BLOCK,TERMINAL	1			1	1	2	2	T
21	RMC 504A 012	HARNESS ASSY	1							FOR COMP.
22	SSA 551A 229	SENSOR ASSY	1			1	1	2	4	TH1,TH2,TH3
23	SSA 552A 178D	CAPACITOR,RUNNING	1			1	1	2	4	440VAC 60μF
24	SSA 552A 836C	CAPACITOR,RUNNING	1			1	1	2	4	450VAC 5μF
25	RKJ 941F 001A	SPRING,LEAF	1							FOR TH1
26	RCJ 941F 001	SPRING,LEAF	1							FOR TH3
(27)	RMC 011F 021CH	LABEL,MODEL NAME	1							FOR S3
(27)	RMC 011F 021CJ	LABEL,MODEL NAME	1							FOR S4
(27)	RMC 011F 021CK	LABEL,MODEL NAME	1							FOR S5
(27)	RMC 011F 021DG	LABEL,MODEL NAME	1							FOR S7

RESIDENTIAL AIR-CONDITIONING TECHNICAL MANUAL & PARTS LIST

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